



mul.

ACIDIC PRECIPITATION IN ONTARIO STUDY

CUMULATIVE AMBIENT AIR CONCENTRATION LISTINGS

DECEMBER 6, 1983 - JANUARY 3, 1985

**Atmospheric Processes Studies Unit
Air Quality and Meteorology Section
Ontario Ministry of the Environment
Air Resources Branch
880 Bay Street, 4th Floor
Toronto, Ontario
Canada, M5S 1Z8**

November, 1985

**A.P.L.O.S. Coordination Office
Ontario Ministry of the Environment
6th Floor, 40 St. Clair Avenue West
Toronto, Ontario
Canada, M4V 1P5**

**TD
195.54
.06
C86
1985
MOE**

© 1985 Her Majesty the Queen in Right of Ontario

TD
195.54
.06
C86
1985

Cumulative ambient air
concentration listings :
December 6, 1983 - January 3,
1985.

77566

ACIDIC PRECIPITATION IN ONTARIO STUDY

CUMULATIVE AMBIENT AIR CONCENTRATION LISTINGS

DECEMBER 6, 1983 - JANUARY 3, 1985

**Atmospheric Processes Studies Unit
Air Quality and Meteorology Section
Ontario Ministry of the Environment
Air Resources Branch
880 Bay Street, 4th Floor
Toronto, Ontario
Canada, M5S 1Z8**

November, 1985

**A.P.L.O.S. Coordination Office
Ontario Ministry of the Environment
6th Floor, 40 St. Clair Avenue West
Toronto, Ontario
Canada, M4V 1P5**

Copyright Provisions and Restrictions on Copying:

This Ontario Ministry of the Environment work is protected by Crown copyright (unless otherwise indicated), which is held by the Queen's Printer for Ontario. It may be reproduced for non-commercial purposes if credit is given and Crown copyright is acknowledged.

It may not be reproduced, in all or in part, part, for any commercial purpose except under a licence from the Queen's Printer for Ontario.

For information on reproducing Government of Ontario works, please contact Service Ontario Publications at copyright@ontario.ca

TABLE OF CONTENTS

		<u>Page</u>																		
PART I	INTRODUCTION	III																		
PART II	STATION DESCRIPTION AND LOCATION MAP	V																		
PART III	SOUTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS																			
	<table><tr><td><u>Station Name</u></td><td><u>Map Ref. No.</u></td><td></td></tr><tr><td>Colchester</td><td>01</td><td>1</td></tr><tr><td>Palmerston</td><td>08</td><td>3</td></tr><tr><td>Port Stanley</td><td>03</td><td>5</td></tr><tr><td>Shallow Lake</td><td>09</td><td>7</td></tr><tr><td>Wilkesport</td><td>04</td><td>9</td></tr></table>	<u>Station Name</u>	<u>Map Ref. No.</u>		Colchester	01	1	Palmerston	08	3	Port Stanley	03	5	Shallow Lake	09	7	Wilkesport	04	9	
<u>Station Name</u>	<u>Map Ref. No.</u>																			
Colchester	01	1																		
Palmerston	08	3																		
Port Stanley	03	5																		
Shallow Lake	09	7																		
Wilkesport	04	9																		
PART IV	CENTRAL REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS																			
	<table><tr><td><u>Station Name</u></td><td><u>Map Ref. No.</u></td><td></td></tr><tr><td>Campbellford</td><td>13</td><td>11</td></tr><tr><td>Dorset</td><td>20</td><td>13</td></tr><tr><td>Milton</td><td>10</td><td>15</td></tr><tr><td>Uxbridge</td><td>11</td><td>17</td></tr></table>	<u>Station Name</u>	<u>Map Ref. No.</u>		Campbellford	13	11	Dorset	20	13	Milton	10	15	Uxbridge	11	17				
<u>Station Name</u>	<u>Map Ref. No.</u>																			
Campbellford	13	11																		
Dorset	20	13																		
Milton	10	15																		
Uxbridge	11	17																		
PART V	SOUTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS																			
	<table><tr><td><u>Station Name</u></td><td><u>Map Ref. No.</u></td><td></td></tr><tr><td>Dalhousie Mills</td><td>16</td><td>19</td></tr><tr><td>Golden Lake</td><td>17</td><td>21</td></tr><tr><td>Smith's Falls</td><td>15</td><td>23</td></tr></table>	<u>Station Name</u>	<u>Map Ref. No.</u>		Dalhousie Mills	16	19	Golden Lake	17	21	Smith's Falls	15	23							
<u>Station Name</u>	<u>Map Ref. No.</u>																			
Dalhousie Mills	16	19																		
Golden Lake	17	21																		
Smith's Falls	15	23																		

**PART VI NORTHEASTERN REGION CUMULATIVE AMBIENT AIR
CONCENTRATION RESULTS**

<u>Station Name</u>	<u>Map Ref. No.</u>	
Attawapiskat	28	25
Gowganda	25	27
Killarney	23	29
Matt9wa	22	31
McKellar	21	33
Moonbeam	27	35
Turkey Lake	37	37

**PART VII NORTHWESTERN REGION CUMULATIVE AMBIENT AIR
CONCENTRATION RESULTS**

<u>Station Name</u>	<u>Map Ref. No.</u>	
Dorion	31	39
Ear Falls	35	41
Geraldton	30	43
Otter Island	38	45
Pickle Lake	36	47

INTRODUCTION

The data listed herein are a summary of the results acquired from the APIOS cumulative ambient air sampling network from December 6, 1983 to January 3, 1985. All data presented in this report have been screened for validity. Remarks and qualifications have been appended to records, and/or results where necessary. The screening procedure involves the application of Dixon Ratio Test to concurrent data from all the sites in the same region over a given sampling period. Field comments are referred to in order to assist in the identification of problematic samples. Samples that were determined to be obvious outliers were flagged as unreliable ("U").

The sampler utilized for cumulative ambient air sampling is the Metrex AS-2 low volume air sampler. The sampler is loaded and the filter pack is exposed for 28 days beginning at 0700 h EST and terminating at 0700 h EST at the end of the sampling period. Sampling details are described in another document¹.

Station Identification

The station identification is defined by four descriptive fields (e.g. - Dorset/Cumulative/LoVol #20). The first field refers to the sampling location. The second and third fields describe the sampling interval and the instrumentation used respectively. The last numeric field refers to the index code utilized on the location map.

Cumulative Ambient Air Concentration Listings

All analytical results presented in this report were blank corrected. Each filter pack is loaded with a Whatman 40 filter, a nylon filter and a pair of Whatman 41 filters with the first two filter types being upstream and the last filter type being downstream. The Whatman 40 filter is analysed for particulates including SO_4^{2-} , NO_3^- and some trace metals. The nylon filter is analysed for gaseous HNO_3 and the Whatman 41 filter (impregnated with K_2CO_3 - glycerol) is analysed for

-
1. Chan, W.H., Orr, D.B. and Vet, R.J. (1984). Acidic Precipitation in Ontario Study - An Overview: The Cumulative Wet/Dry Deposition Network. Ontario Ministry of the Environment Report #ARB-164-84-ARSP.

gaseous SO₂. The reported parameter "TOTL NO₃" represents total nitrates and is calculated by the summation of N-HNO₃ and N-NO₃. No individual value of particulate nitrate and nitric acid are reported due to potential artifacts of the filter media used. If a detection limit is encountered in the calculation of "TOTL NO₃" then a value corresponding to one half the detection limit is utilized. Remark codes (e.g. -U, A) appended to individual results are defined in a later section.

Field Comment Code Index

- A - Sampler malfunction
- B - Hydro failure (known/suspected)
- C - Flow volume suspect
- D - Contamination (known/suspected)
- E - Filter placement incorrect
- F - Sample not submitted
- Q - Other

Office Comment Code Index

- F - Data invalidated - if the daily average flow volume is outside the range of (2880 ± 50%) litres per day.
- Z - Abnormal sampling period.

Result Remark Code Index

- > - actual result greater than value reported
- < - actual result less than value reported
- < T - actual result less than criterion of detection
- < W - no response, minimum possible result reported
- A - approximate value
- U - unreliable result
- D - outlier of Dixon Ratio Test

PART I

INTRODUCTION

PART II

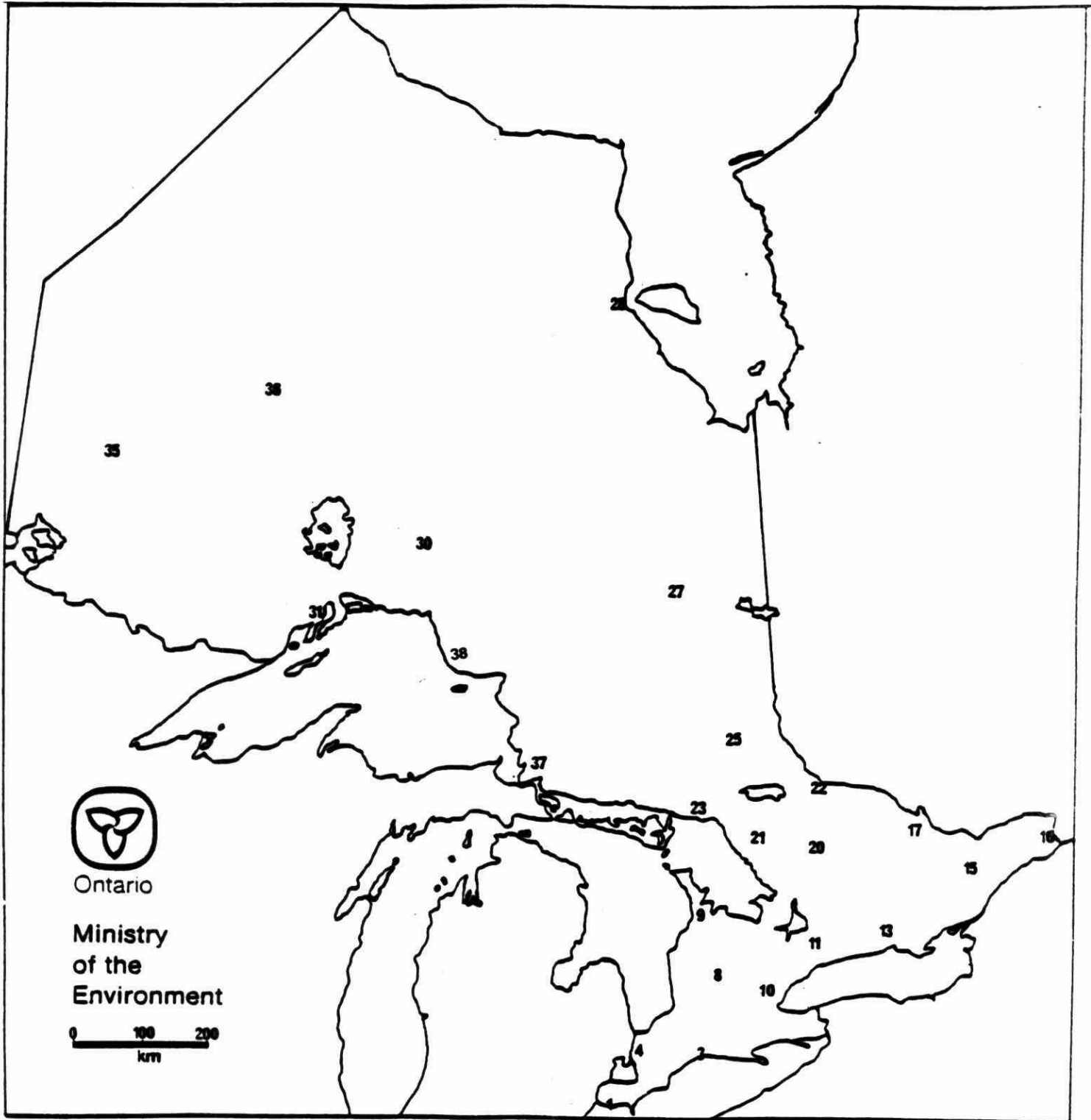
STATION DESCRIPTION AND LOCATION MAP

APIOs CUMULATIVE DRY DEPOSITION NETWORK SITE DESCRIPTIONS

<u>MOE REGION</u>	<u>STATION NAME</u>	<u>ELEVATION</u> (m above MSL)	<u>LATITUDE</u> (North)	<u>LONGITUDE</u> (West)	<u>UTM GRID CO-ORDINANTS</u>	
					(Northing)	(Easting)
Southwestern	Colchester	183	41°59'15"	82°55'41"	4650000	340300
	Pt. Stanley	213	42°40'22"	81°09'55"	4724050	486700
	Wilkesport	183	42°42'11"	82°21'13"	4728350	389150
	Shallow Lake	229	44°34'54"	81°05'24"	4936200	492850
	Palmerston	389	43°48'19"	80°54'12"	4850050	507750
Central	Dorset	320	45°13'26"	78°55'52"	5009650	662400
	Milton	221	43°31'05"	79°55'54"	4818600	586350
	Uxbridge	244	44°12'46"	79°12'38"	4896800	643000
	Campbellford	175	44°17'28"	77°47'33"	4907600	277150
Southeastern	Smith's Falls	122	44°56'41"	75°57'48"	4977100	423950
	Dalhousie Mills	69	45°19'00"	74°28'13"	5018100	541550
	Golden Lake	160	45°36'48"	77°12'03"	5053200	328400
Northeastern	McKellar	244	45°30'57"	79°55'19"	5040600	583950
	Killarney	183	45°59'26"	81°29'18"	5092900	462200
	Mattawa	198	46°16'45"	78°49'19"	5127150	667800
	Gowganda	343	47°39'04"	80°46'32"	5277300	516600
	Moonbeam	244	49°19'16"	82°08'46"	5463600	416650
	Turkey Lake	472	47°03'15"	84°24'00"	5214250	696750
	Attawapiskat	9	52°56'00"	82°24'00"	NA	NA
Northwestern	Otter Island	204	48°06'50"	86°04'25"	5328750	569500
	Dorion	244	48°50'33"	88°36'45"	5410800	382150
	Geraldton	351	49°48'05"	86°46'00"	5516300	516750
	Ear Falls	350	50°38'31"	93°13'13"	5609800	484150
	Pickle Lake	360	51°27'41"	90°12'04"	5704800	694550

- VI -
FIGURE 1

LOCATION OF APIOS CUMULATIVE AMBIENT AIR MONITORING NETWORK SITES



- | | | |
|-----------------|-------------------|--|
| 1. Colchester | 13. Campbellford | 25. Gowganda |
| 3. Pt. Stanley | 15. Smith's Falls | 27. Moonbeam |
| 4. Wilkesport | 16. Dalhousie | 28. Attawapiskat |
| 8. Palmerston | 17. Golden Lake | 30. Geraldton (Replacing Nakina,
August 1983) |
| 9. Shallow Lake | 20. Dorset | 31. Dorion |
| 10. Milton | 21. Mckellar | 35. Ear Falls |
| 11. Uxbridge | 22. Mattawa | 36. Pickle Lake |
| | 23. Killarney | 37. Turkey Lake |
| | | 38. Otter Island |

PART III

SOUTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLCHESTER/CUMULATIVE/LO-VOL #1

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	852	820	67830.0	99176	2	1		
JAN 31,84	JAN 13,84	820	805	49840.0	99182	2	1		Z
FEB 28,84	FEB 2,84	900	806	64080.0	99188	2	1	CD	Z
MAR 27,84	FEB 28,84	816	800	81033.0	99196	2	1		
APR 24,84	MAR 27,84	800	805	79676.0	99206	2	1	Q	
MAY 22,84	APR 24,84	820	735	73384.0	99214	2	1	D	
JUN 19,84	MAY 22,84	735	755	83485.0	99225	2	1		
JUL 17,84	JUN 19,84	755	740	76222.0	99232	2	1	D	
AUG 14,84	JUL 18,84	1600	800	68162.0	99241	2	1	Q	
SEP 11,84	AUG 14,84	800	800	78052.0	99249	2	1		
OCT 8,84	SEP 11,84	812	802	63053.0	99255	2	1	C	
NOV 6,84	OCT 8,84	802	1130	61350.0	16457	2	1	C	
DEC 4,84	NOV 6,84	1130	800	81588.0	19726	2	1		
JAN 1,85	DEC 4,84	815	930	35461.0	19740	2	1	CD	F

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	33.66	4.46	1.179	0.907	0.364	0.114	0.100
JAN 31,84	JAN 13,84	35.05	6.22	1.710	1.043	0.305	0.106	0.115
FEB 28,84	FEB 2,84	17.53	4.68	1.580	0.882	0.574	0.182	0.101
MAR 27,84	FEB 28,84	18.22	6.02	1.145	0.821	0.622	0.175	0.080
APR 24,84	MAR 27,84	5.44	3.95	1.013	0.615	0.586	0.154	D 0.188
MAY 22,84	APR 24,84	> 4.54	5.65	1.397	0.681	0.966	0.294	0.129
JUN 19,84	MAY 22,84	4.27	7.25	1.282	0.773	1.000	0.289	0.135
JUL 17,84	JUN 19,84	9.10	7.44	1.233	0.689	0.966	0.270	0.151
AUG 14,84	JUL 18,84	11.39	11.19	1.430	0.521	0.893	0.321	0.176
SEP 11,84	AUG 14,84	9.91	9.13	0.996	0.455	0.839	0.494	0.135
OCT 8,84	SEP 11,84	14.70	6.19	1.126	0.722	0.720	0.228	0.111
NOV 6,84	OCT 8,84	13.69	6.32	1.243	0.709	0.445	0.142	0.106
DEC 4,84	NOV 6,84	12.99	4.07	1.235	0.699	0.972	0.280	0.135
JAN 1,85	DEC 4,84	19.50	3.81	1.410	1.029	0.488	0.152	0.092

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLCHESTER/CUMULATIVE/LO-VOL

#1

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANESE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.273	0.069	0.054	0.055	0.0066	D 0.0066	< 0.00074
JAN 31,84	JAN 13,84	0.597	0.095	0.040	0.094	0.0100	0.0040	< 0.00100
FEB 28,84	FEB 2,84	0.250	0.093	0.066	0.072	0.0109	0.0047	0.00125
MAR 27,84	FEB 28,84	0.312	0.198	0.136	0.043	0.0117	0.0041	0.00185
APR 24,84	MAR 27,84	0.154	0.192	0.115	0.060	0.0094	0.0056	0.00251
MAY 22,84	APR 24,84	0.116	0.376	0.350	0.073	0.0177	D 0.0031	0.00109
JUN 19,84	MAY 22,84	0.150	0.410	0.398	D 0.092	0.0180	0.0054	0.00299
JUL 17,84	JUN 19,84	0.102	0.468	0.371	0.099	0.0197	0.0066	0.00197
AUG 14,84	JUL 18,84	0.106	D 0.453	0.298	0.136	0.0161	0.0051	0.00440
SEP 11,84	AUG 14,84	0.183	0.259	0.173	D 0.074	0.0160	0.0006	0.00320
OCT 8,84	SEP 11,84	0.111	0.213	0.127	0.079	0.0182	0.0056	0.00238
NOV 6,84	OCT 8,84	D 0.130	0.169	0.129	0.071	0.0114	0.0041	0.00163
DEC 4,84	NOV 6,84	0.193	0.192	0.138	0.082	0.0153	0.0026	0.00098
JAN 1,85	DEC 4,84	0.240	0.180	0.120	0.069	0.0099	0.0051	0.00592

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0015	0.037	0.00047
JAN 31,84	JAN 13,84	< 0.0020	0.053	0.00056
FEB 28,84	FEB 2,84	< 0.0016	0.054	0.00078
MAR 27,84	FEB 28,84	0.0025	0.048	0.00080
APR 24,84	MAR 27,84	< 0.0013	0.053	0.00113
MAY 22,84	APR 24,84	< 0.0014	0.057	0.00055
JUN 19,84	MAY 22,84	0.0024	0.048	0.00078
JUL 17,84	JUN 19,84	< 0.0013	0.070	0.00131
AUG 14,84	JUL 18,84	< 0.0015	0.043	0.00103
SEP 11,84	AUG 14,84	0.0014	0.045	0.00369
OCT 8,84	SEP 11,84	0.0011	0.044	D 0.00155
NOV 6,84	OCT 8,84	0.0016	0.042	0.00119
DEC 4,84	NOV 6,84	0.0017	0.048	0.00100
JAN 1,85	DEC 4,84	0.0017	0.035	0.00099

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PALMERSTON/CUMULATIVE/LO-VOL

#8

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 11,84	DEC 6,83	1215	1000	58550.0	99181	2	1	B	Z
JAN 31,84	JAN 11,84	1000	1300	45560.0	99187	2	1	Q	Z
FEB 28,84	JAN 31,84	1300	1300	73000.0	99193	2	1		
MAR 27,84	FEB 28,84	1300	1300	54090.0	99201	2	1	B	
APR 24,84	MAR 27,84	1300	1300	80284.0	99211	2	1		
MAY 22,84	APR 24,84	1300	1200	82400.0	99219	2	1		
JUN 19,84	MAY 22,84	1200	1300	83611.0	99230	2	1		
JUL 17,84	JUN 19,84	1300	1300	79568.0	99237	2	1		
AUG 14,84	JUL 17,84	1300	1300	84021.0	99246	2	1		
SEP 11,84	AUG 14,84	1300	1300	73150.0	99252	2	1		
OCT 9,84	SEP 11,84	1300	1300	75288.0	99258	2	1		
NOV 6,84	OCT 9,84	1300	1300	64324.0	16462	2	1		
DEC 3,84	NOV 6,84	1300	1300	81721.0	19736	2	1		
DEC 31,84	DEC 3,84	1300	1300	36435.0	19737	2	1	C	F

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 11,84	DEC 6,83	18.67	3.54	0.918	0.547	0.140	0.052	0.056
JAN 31,84	JAN 11,84	22.39	4.94	1.422	0.790	0.184	0.054	0.055
FEB 28,84	JAN 31,84	17.35	5.03	1.674	0.575	0.307	D 0.101	0.075
MAR 27,84	FEB 28,84	5.73	3.88	0.675	0.481	0.375	D 0.148	0.037
APR 24,84	MAR 27,84	2.68	3.27	0.716	0.349	0.476	0.131	0.053
MAY 22,84	APR 24,84	3.60	4.46	1.047	0.358	1.006	0.378	0.088
JUN 19,84	MAY 22,84	2.95	4.72	0.843	0.383	0.840	0.251	0.066
JUL 17,84	JUN 19,84	2.07	4.96	0.707	0.352	0.769	0.254	0.072
AUG 14,84	JUL 17,84	1.78	9.07	0.660	0.369	0.874	D 0.375	0.101
SEP 11,84	AUG 14,84	2.85	6.84	0.718	0.465	0.695	0.265	0.267
OCT 9,84	SEP 11,84	2.81	4.48	0.890	0.372	0.543	0.159	0.086
NOV 6,84	OCT 9,84	3.06	5.17	1.372	0.466	0.421	0.127	0.148
DEC 3,84	NOV 6,84	5.30	3.36	1.074	0.416	0.396	0.133	0.064
DEC 31,84	DEC 3,84	6.54	D 3.91	1.269	0.823	0.384	0.104	0.069

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PALMERSTON/CUMULATIVE/LO-VOL

#8

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 11,84	DEC 6,83	0.205	0.032	0.025	0.043	0.0026	0.0017	< 0.00085
JAN 31,84	JAN 11,84	0.357	0.063	0.026	0.053	0.0040	0.0044	< 0.00110
FEB 28,84	JAN 31,84	0.171	0.060	D 0.063	0.073	0.0110	0.0027	< 0.00068
MAR 27,84	FEB 28,84	0.203	0.146	D 0.099	0.039	0.0074	< 0.0009	< 0.00092
APR 24,84	MAR 27,84	0.103	0.095	0.068	0.046	0.0056	0.0066	< 0.00062
MAY 22,84	APR 24,84	0.073	0.282	0.329	0.019	0.0127	0.0028	0.00097
JUN 19,84	MAY 22,84	0.108	0.330	0.300	0.054	0.0138	0.0036	0.00120
JUL 17,84	JUN 19,84	0.047	0.229	0.286	0.059	0.0100	0.0031	0.00314
AUG 14,84	JUL 17,84	0.057	0.290	0.253	0.072	0.0083	0.0021	0.00238
SEP 11,84	AUG 14,84	0.109	0.131	0.095	0.036	0.0082	0.0027	0.00205
OCT 9,84	SEP 11,84	0.060	0.115	0.068	0.040	0.0086	0.0027	0.00066
NOV 6,84	OCT 9,84	0.078	0.147	0.098	0.066	0.0085	0.0031	0.00311
DEC 3,84	NOV 6,84	0.101	0.102	0.055	0.050	0.0067	0.0038	0.00343
DEC 31,84	DEC 3,84	0.178	0.165	0.143	0.038	0.0096	0.0069	0.00631

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 11,84	DEC 6,83	< 0.0017	0.018	0.00034
JAN 31,84	JAN 11,84	< 0.0022	0.030	0.00048
FEB 28,84	JAN 31,84	< 0.0014	0.047	0.00058
MAR 27,84	FEB 28,84	0.0028	0.027	0.00065
APR 24,84	MAR 27,84	< 0.0012	0.021	0.00056
MAY 22,84	APR 24,84	< 0.0012	0.019	0.00030
JUN 19,84	MAY 22,84	< 0.0012	0.020	0.00036
JUL 17,84	JUN 19,84	< 0.0013	0.019	0.00057
AUG 14,84	JUL 17,84	< 0.0012	0.017	0.00054
SEP 11,84	AUG 14,84	0.0007	0.015	0.00066
OCT 9,84	SEP 11,84	0.0020	0.024	0.00057
NOV 6,84	OCT 9,84	0.0019	0.022	0.00059
DEC 3,84	NOV 6,84	0.0013	0.022	0.00061
DEC 31,84	DEC 3,84	0.0011	0.026	0.00082

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PORT STANLEY/CUMULATIVE/LO-VOL #3

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	930	1330	77848.0	99177	2	1	B	
JAN 31,84	JAN 3,84	1330	930	79859.0	99183	2	1		
FEB 28,84	JAN 31,84	930	930	42323.0	99189	2	1	B	
MAR 27,84	FEB 28,84	930	900	70953.0	99197	2	1		
APR 24,84	MAR 27,84	900	900	78811.0	99207	2	1		
MAY 22,84	APR 24,84	900	900	78092.0	99215	2	1		
JUN 19,84	MAY 22,84	900	900	77531.0	99226	2	1	Q	
JUL 17,84	JUN 19,84	900	830	78852.0	99233	2	1		
AUG 14,84	JUL 17,84	830	900	36408.0	99242	2	1	BQ	F
SEP 11,84	AUG 14,84	900	900	80634.0	99247	2	1		
OCT 9,84	SEP 11,84	900	930	83614.0	99250	2	1	C	
NOV 6,84	OCT 9,84	930	1400	72726.0	16458	2	1	C	
DEC 4,84	NOV 6,84	1400	900	85088.0	19723	2	1		
JAN 2,85	DEC 4,84	900	1430	66290.0	19738	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	24.32	4.14	1.140	0.655	0.384	0.087	0.100
JAN 31,84	JAN 3,84	32.81	5.29	1.628	0.864	0.230	0.056	0.119
FEB 28,84	JAN 31,84	12.52	4.25	1.441	0.744	0.359	0.083	0.089
MAR 27,84	FEB 28,84	16.37	5.46	1.127	0.585	0.565	0.140	0.067
APR 24,84	MAR 27,84	4.02	3.27	0.853	0.419	0.480	0.104	0.054
MAY 22,84	APR 24,84	9.86	5.28	1.351	0.557	0.940	D 0.235	0.093
JUN 19,84	MAY 22,84	3.91	6.71	1.141	0.516	0.682	0.108	0.106
JUL 17,84	JUN 19,84	3.44	6.44	0.869	0.507	0.660	0.142	0.178
AUG 14,84	JUL 17,84	2.24	12.50	1.620	0.700	0.640	0.136	0.206
SEP 11,84	AUG 14,84	7.85	7.75	0.741	0.372	0.576	0.344	0.087
OCT 9,84	SEP 11,84	6.98	3.89	0.718	0.329	0.560	0.185	0.129
NOV 6,84	OCT 9,84	10.45	5.16	1.138	0.516	0.358	0.082	0.072
DEC 4,84	NOV 6,84	14.57	3.79	1.199	0.605	0.559	0.110	0.270
JAN 2,85	DEC 4,84	10.69	2.11	0.841	0.528	0.258	0.067	0.057

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PORT STANLEY/CUMULATIVE/LO-VOL #3

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.238	0.121	D 0.149	0.040	0.0103	0.0019	< 0.00064
JAN 31,84	JAN 3,84	0.426	0.075	0.042	0.053	0.0075	0.0038	0.00163
FEB 28,84	JAN 31,84	0.207	0.070	0.060	0.047	0.0118	0.0047	< 0.00118
MAR 27,84	FEB 28,84	0.201	0.228	D 0.234	0.045	0.0127	0.0018	0.00254
APR 24,84	MAR 27,84	0.095	0.118	D 0.080	0.039	0.0089	0.0023	0.00102
MAY 22,84	APR 24,84	0.086	0.395	D 0.394	0.054	0.0192	0.0049	0.00102
JUN 19,84	MAY 22,84	0.113	0.526	0.129	0.053	0.0213	0.0045	0.00194
JUL 17,84	JUN 19,84	0.073	0.299	0.285	0.066	0.0140	0.0063	0.00824
AUG 14,84	JUL 17,84	0.117	0.357	0.206	0.124	0.0124	0.0022	0.00494
SEP 11,84	AUG 14,84	0.115	0.190	0.125	0.042	0.0143	0.0037	0.00248
OCT 9,84	SEP 11,84	0.072	0.143	0.091	0.057	0.0108	0.0024	0.00239
NOV 6,84	OCT 9,84	0.072	0.154	0.110	0.047	0.0103	0.0021	0.00206
DEC 4,84	NOV 6,84	0.194	0.150	0.108	0.037	0.0106	0.0028	0.00094
JAN 2,85	DEC 4,84	D 0.128	0.124	0.100	0.026	0.0060	0.0027	0.00362

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0013	0.026	0.00041
JAN 31,84	JAN 3,84	0.0019	0.040	0.00073
FEB 28,84	JAN 31,84	< 0.0024	0.046	0.00076
MAR 27,84	FEB 28,84	0.0035	0.041	0.00056
APR 24,84	MAR 27,84	< 0.0013	0.024	0.00044
MAY 22,84	APR 24,84	< 0.0013	0.034	0.00045
JUN 19,84	MAY 22,84	0.0026	0.048	0.00052
JUL 17,84	JUN 19,84	< 0.0013	0.034	0.00063
AUG 14,84	JUL 17,84	< 0.0027	0.040	D 0.00137
SEP 11,84	AUG 14,84	0.0010	0.019	0.00091
OCT 9,84	SEP 11,84	0.0008	0.023	0.00063
NOV 6,84	OCT 9,84	0.0022	0.021	0.00066
DEC 4,84	NOV 6,84	0.0014	0.035	0.00059
JAN 2,85	DEC 4,84	0.0012	0.016	0.00053

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SHALLOW LAKE/CUMULATIVE/LO-VOL #9

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	915	830	81789.0	99180	2	1		
FEB 3,84	JAN 11,84	1330	845	65427.0	99186	2	1		Z
FEB 28,84	FEB 3,84	845	830	73445.0	99192	2	1	Q	Z
MAR 27,84	FEB 28,84	830	830	84472.0	99200	2	1		
MAY 6,84	MAR 27,84	830	900	117530.0	99210	2	1	Q	Z
MAY 22,84	MAY 6,84	900	715	46541.0	99218	2	1		Z
JUN 19,84	MAY 22,84	715	830	80469.0	99229	2	1		
JUL 17,84	JUN 19,84	830	1700	80653.0	99236	2	1		
AUG 14,84	JUL 17,84	1700	830	77806.0	99245	2	1		
SEP 11,84	AUG 14,84	830	845	68786.0	99253	2	1	CB	
OCT 9,84	SEP 11,84	845	800	67493.0	99254	2	1	C	
NOV 6,84	OCT 9,84	800	830	65395.0	16461	2	1	C	
DEC 5,84	NOV 6,84	830	830	80498.0	19725	2	1		
JAN 2,85	DEC 5,84	830	730	51612.0	19770	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	16.91	2.75	0.636	0.342	0.061	0.028	0.049
FEB 3,84	JAN 11,84	30.72	4.13	1.238	0.466	0.144	0.039	0.076
FEB 28,84	FEB 3,84	13.66	4.19	1.453	0.422	0.207	0.049	0.068
MAR 27,84	FEB 28,84	5.80	3.67	0.577	0.337	0.217	0.078	0.047
MAY 6,84	MAR 27,84	2.14	2.60	0.417	0.187	0.514	0.150	0.047
MAY 22,84	MAY 6,84	3.73	4.19	0.768	0.473	0.837	0.243	0.279
JUN 19,84	MAY 22,84	2.51	4.35	1.147	0.317	0.698	0.174	0.065
JUL 17,84	JUN 19,84	1.47	4.03	0.422	0.279	0.525	0.141	0.059
AUG 14,84	JUL 17,84	0.75	7.39	0.222	0.296	0.370	0.122	0.096
SEP 11,84	AUG 14,84	3.63	6.14	0.400	0.407	0.335	0.124	0.087
OCT 9,84	SEP 11,84	2.74	4.30	0.585	0.341	0.331	0.110	0.067
NOV 6,84	OCT 9,84	2.80	3.67	0.562	0.252	0.246	0.067	0.164
DEC 5,84	NOV 6,84	9.19	2.89	1.053	0.397	0.411	0.099	0.127
JAN 2,85	DEC 5,84	6.98	3.16	0.964	0.533	0.311	0.089	0.058

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SHALLOW LAKE/CUMULATIVE/LO-VOL #9

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.165	0.023	0.017	0.025	0.0016	0.0016	< 0.00061
FEB 3,84	JAN 11,84	0.267	0.046	0.021	0.031	0.0061	0.0031	< 0.00076
FEB 28,84	FEB 3,84	0.136	0.031	0.029	0.037	0.0061	0.0034	0.00177
MAR 27,84	FEB 28,84	0.183	0.078	0.047	0.029	0.0041	0.0059	< 0.00059
MAY 6,84	MAR 27,84	0.072	0.191	0.231	0.022	0.0081	0.0013	0.00068
MAY 22,84	MAY 6,84	0.193	0.192	0.175	0.033	0.0086	0.0028	< 0.00107
JUN 19,84	MAY 22,84	0.081	0.219	0.255	0.035	0.0112	0.0050	0.00124
JUL 17,84	JUN 19,84	0.050	0.189	0.210	0.042	0.0087	0.0029	0.00223
AUG 14,84	JUL 17,84	0.051	D 0.202	0.128	0.039	0.0058	0.0023	0.00103
SEP 11,84	AUG 14,84	0.076	0.080	0.079	0.028	0.0058	0.0022	0.00160
OCT 9,84	SEP 11,84	0.059	0.090	0.075	0.031	0.0044	0.0022	0.00104
NOV 6,84	OCT 9,84	0.065	0.087	0.056	0.031	0.0054	0.0023	0.00229
DEC 5,84	NOV 6,84	0.087	0.099	0.063	0.034	0.0062	0.0015	0.00161
JAN 2,85	DEC 5,84	0.184	0.117	0.113	0.025	0.0078	0.0031	0.00252

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0012	0.013	0.00031
FEB 3,84	JAN 11,84	< 0.0015	0.031	0.00073
FEB 28,84	FEB 3,84	< 0.0014	0.025	0.00052
MAR 27,84	FEB 28,84	0.0024	0.017	0.00071
MAY 6,84	MAR 27,84	< 0.0009	0.011	0.00064
MAY 22,84	MAY 6,84	< 0.0021	0.018	0.00043
JUN 19,84	MAY 22,84	< 0.0012	0.017	0.00043
JUL 17,84	JUN 19,84	< 0.0012	0.014	0.00037
AUG 14,84	JUL 17,84	< 0.0013	0.012	0.00064
SEP 11,84	AUG 14,84	0.0009	0.011	0.00055
OCT 9,84	SEP 11,84	0.0006	0.015	0.00049
NOV 6,84	OCT 9,84	0.0009	0.011	0.00058
DEC 5,84	NOV 6,84	0.0014	0.019	0.00037
JAN 2,85	DEC 5,84	0.0014	0.014	0.00085

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILKESPORT/CUMULATIVE/LO-VOL #4

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	1300	1300	89530.0	99179	2	1	C	
JAN 31,84	JAN 10,84	1300	1300	62240.0	99185	2	1	Q	Z
MAR 1,84	JAN 31,84	1300	930	48425.0	99191	2	1	B	Z
MAR 27,84	MAR 2,84	1320	1230	56610.0	99199	2	1	B	Z
APR 24,84	MAR 27,84	1230	930	77350.0	99209	2	1		
MAY 22,84	APR 24,84	930	1130	88550.0	99217	2	1		
JUN 19,84	MAY 22,84	1130	1330	40210.0	99228	2	1	C	F
AUG 14,84	JUL 17,84	1100	1215	59404.0	99244	2	1	B	
SEP 11,84	AUG 14,84	1230	1400	75814.0	99257	2	1		
OCT 9,84	SEP 11,84	1400	1030	70438.0	99256	2	1		
NOV 6,84	OCT 9,84	1030	1400	40234.0	16460	2	1	B	F
DEC 6,84	NOV 6,84	1400	1300	34683.0	19727	2	1	AB	FZ
JAN 2,85	DEC 6,84	1300	1430	38690.0	19741	2	1	C	F

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	25.88	3.27	0.835	0.547	0.284	0.044	0.078
JAN 31,84	JAN 10,84	34.17	5.58	1.578	1.502	0.239	0.061	0.149
MAR 1,84	JAN 31,84	25.26	6.61	1.930	1.053	0.425	0.093	0.124
MAR 27,84	MAR 2,84	19.90	7.33	1.267	0.892	0.996	0.140	0.057
APR 24,84	MAR 27,84	5.95	4.10	0.889	0.517	1.335	0.146	0.052
MAY 22,84	APR 24,84	11.41	4.94	1.188	0.542	D 2.002	0.293	0.073
JUN 19,84	MAY 22,84	6.96	4.23	1.119	0.846	0.862	0.244	0.062
AUG 14,84	JUL 17,84	4.94	10.52	0.980	0.673	0.742	0.159	0.274
SEP 11,84	AUG 14,84	11.43	> 6.60	0.798	0.587	0.636	0.207	0.076
OCT 9,84	SEP 11,84	9.84	4.90	0.852	0.547	0.775	0.139	0.163
NOV 6,84	OCT 9,84	7.79	7.70	1.485	0.783	0.511	0.093	0.068
DEC 6,84	NOV 6,84	7.40	3.96	1.196	0.649	0.812	0.130	0.123
JAN 2,85	DEC 6,84	20.68	4.56	1.409	0.969	0.424	0.085	0.161

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILKESPORT/CUMULATIVE/LO-VOL

#4

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.100	0.059	0.035	0.054	0.0061	0.0022	< 0.00056
JAN 31,84	JAN 10,84	0.607	0.083	0.041	0.088	0.0088	0.0040	< 0.00080
MAR 1,84	JAN 31,84	0.305	0.071	0.061	0.074	0.0124	0.0041	< 0.00103
MAR 27,84	MAR 2,84	0.225	0.182	0.131	0.044	0.0088	0.0023	0.00141
APR 24,84	MAR 27,84	0.116	0.135	0.116	0.048	0.0071	0.0017	< 0.00065
MAY 22,84	APR 24,84	0.099	0.340	0.352	0.046	0.0153	0.0049	0.00147
JUN 19,84	MAY 22,84	0.099	0.850	0.801	0.052	0.0186	0.0087	0.00249
AUG 14,84	JUL 17,84	0.101	0.353	0.284	0.081	0.0109	0.0042	0.00337
SEP 11,84	AUG 14,84	0.125	0.201	0.160	0.042	0.0105	0.0026	0.00198
OCT 9,84	SEP 11,84	0.085	0.178	0.118	0.055	0.0099	0.0035	0.00213
NOV 6,84	OCT 9,84	0.075	0.127	0.101	0.058	0.0112	0.0050	0.00497
DEC 6,84	NOV 6,84	D 0.101	0.169	0.115	0.066	0.0144	0.0035	0.00231
JAN 2,85	DEC 6,84	0.239	0.167	0.114	0.079	0.0103	0.0047	0.00801

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0011	0.041	0.00061
JAN 31,84	JAN 10,84	< 0.0016	0.054	0.00077
MAR 1,84	JAN 31,84	< 0.0021	0.075	D 0.00093
MAR 27,84	MAR 2,84	0.0044	0.049	0.00062
APR 24,84	MAR 27,84	0.0026	0.020	0.00052
MAY 22,84	APR 24,84	0.0023	0.037	0.00040
JUN 19,84	MAY 22,84	< 0.0025	D 0.031	0.00037
AUG 14,84	JUL 17,84	< 0.0017	0.038	0.00101
SEP 11,84	AUG 14,84	0.0020	0.022	0.00057
OCT 9,84	SEP 11,84	0.0016	0.025	0.00068
NOV 6,84	OCT 9,84	0.0017	0.031	0.00082
DEC 6,84	NOV 6,84	0.0009	0.046	0.00066
JAN 2,85	DEC 6,84	0.0021	0.044	0.00090

PART IV

CENTRAL REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CAMPBELLFORD/CUMULATIVE/LO-VOL #13

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING		FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE	SUBPROJECT CODE	COMMENTS	
		START HR.	END HR.			02-APIOS 03-SPECIAL	01-MOE 03-AES 04-ON HYDRO	FIELD	OFFICE
JAN 3,84	DEC 6,83	800	800	86730.0	21210	2	1		
JAN 31,84	JAN 3,84	800	830	83500.0	21215	2	1		
FEB 28,84	JAN 31,84	830	900	81260.0	94003	2	1		
MAR 27,84	FEB 28,84	900	800	80710.0	94007	2	1		
APR 24,84	MAR 27,84	830	800	78520.0	94011	2	1		
MAY 22,84	APR 24,84	800	800	77550.0	94015	2	1		
JUN 19,84	MAY 22,84	800	830	72580.0	24353	2	1		
JUL 17,84	JUN 19,84	830	800	73870.0	24366	2	1		
AUG 14,84	JUL 17,84	800	800	74260.0	94019	2	1		
SEP 11,84	AUG 14,84	800	1000	73380.0	94023	2	1		
OCT 9,84	SEP 11,84	1000	800	44360.0	94026	2	1	A	
NOV 6,84	OCT 9,84	800	830	2070.0	94031	2	1	AC	F

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	16.45	3.03	0.700	0.525	0.417	0.045	D 0.072
JAN 31,84	JAN 3,84	19.80	4.82	1.078	0.557	0.307	0.043	0.132
FEB 28,84	JAN 31,84	13.33	4.98	1.151	0.505	0.431	0.042	0.071
MAR 27,84	FEB 28,84	D 7.35	3.56	0.592	0.353	0.551	0.063	0.056
APR 24,84	MAR 27,84	0.86	2.42	0.382	0.229	0.969	0.071	0.070
MAY 22,84	APR 24,84	1.44	2.74	0.519	0.213	0.983	0.116	0.093
JUN 19,84	MAY 22,84	D 8.22	6.03	0.803	0.344	1.568	0.153	D 0.117
JUL 17,84	JUN 19,84	1.83	5.55	0.487	0.305	2.802	0.127	0.135
AUG 14,84	JUL 17,84	1.19	8.55	0.364	0.337	2.114	0.132	0.077
SEP 11,84	AUG 14,84	1.07	3.27	0.157	D 0.129	1.099	0.098	0.164
OCT 9,84	SEP 11,84	3.01	5.75	0.783	0.417	1.093	0.098	0.124
NOV 6,84	OCT 9,84	U 15.29	U 51.93	U 11.111	U 6.763	U 7.923	U 0.870	U 1.449

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CAMPBELLFORD/CUMULATIVE/LO-VOL #13

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.291	0.029	0.030	0.044	0.0035	0.0015	< 0.00058
JAN 31,84	JAN 3,84	0.359	0.051	0.028	0.039	0.0102	0.0030	0.00096
FEB 28,84	JAN 31,84	0.243	0.062	0.033	0.071	0.0068	0.0018	0.00160
MAR 27,84	FEB 28,84	0.245	0.049	0.043	0.028	0.0050	0.0022	0.00161
APR 24,84	MAR 27,84	0.102	0.097	0.074	0.036	0.0051	0.0010	0.00102
MAY 22,84	APR 24,84	0.061	0.282	0.299	0.034	0.0135	0.0030	< 0.00064
JUN 19,84	MAY 22,84	0.107	0.296	0.397	0.039	0.0138	0.0018	0.00207
JUL 17,84	JUN 19,84	0.058	0.211	0.249	0.049	0.0095	0.0045	0.00203
AUG 14,84	JUL 17,84	0.061	0.294	0.275	0.066	0.0121	D 0.0054	0.00539
SEP 11,84	AUG 14,84	0.116	0.178	0.149	0.049	0.0075	0.0034	0.00177
OCT 9,84	SEP 11,84	D 0.090	0.175	0.141	0.073	0.0090	0.0050	0.00428
NOV 6,84	OCT 9,84	U 1.329	U 1.691	U 1.295	U 0.845	U 0.1449	U 0.1256	U 0.15460

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0012	0.014	0.00046
JAN 31,84	JAN 3,84	0.0018	0.028	0.00062
FEB 28,84	JAN 31,84	< 0.0012	0.025	0.00059
MAR 27,84	FEB 28,84	< 0.0012	0.014	0.00052
APR 24,84	MAR 27,84	0.0019	0.017	0.00025
MAY 22,84	APR 24,84	< 0.0013	0.015	0.00052
JUN 19,84	MAY 22,84	< 0.0014	0.021	0.00032
JUL 17,84	JUN 19,84	< 0.0014	0.018	0.00041
AUG 14,84	JUL 17,84	< 0.0013	0.017	0.00047
SEP 11,84	AUG 14,84	< 0.0014	0.026	0.00082
OCT 9,84	SEP 11,84	0.0034	0.029	D 0.00401
NOV 6,84	OCT 9,84	U 0.0531	U 0.217	U 0.01256

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/CUMULATIVE/LO-VOL

#20

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	1430	1515	84868.0	29274	2	1		
JAN 31,84	JAN 3,84	1515	1340	81604.0	29277	2	1		
FEB 28,84	JAN 31,84	1340	955	76472.0	29293	2	1		
MAR 27,84	FEB 28,84	955	1000	80924.0	29304	2	1		
APR 24,84	MAR 27,84	1010	1135	76208.0	29316	2	1		
MAY 22,84	APR 24,84	1135	1125	76160.0	29324	2	1		
JUN 19,84	MAY 22,84	1125	900	73387.0	29339	2	1		
JUL 17,84	JUN 19,84	900	1230	75075.0	29342	2	1		
AUG 14,84	JUL 17,84	1230	945	72830.0	29344	2	1		
SEP 11,84	AUG 14,84	945	1212	77972.0	29355	2	1		
OCT 9,84	SEP 11,84	1214	950	74255.0	29360	2	1		
NOV 6,84	OCT 9,84	950	1012	70934.0	29379	2	1		
DEC 4,84	NOV 6,84	1014	1242	76424.0	29386	2	1		
JAN 2,85	DEC 4,84	1244	1012	100915.0	29388	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	14.78	2.71	0.448	0.141	0.035	0.026	0.044
JAN 31,84	JAN 3,84	18.87	3.61	0.769	0.153	0.043	D 0.033	0.061
FEB 28,84	JAN 31,84	10.29	4.05	0.840	0.216	0.086	0.022	0.049
MAR 27,84	FEB 28,84	5.97	2.94	0.290	0.124	0.060	0.042	0.040
APR 24,84	MAR 27,84	1.09	2.03	0.233	0.098	0.107	0.030	0.049
MAY 22,84	APR 24,84	1.36	3.02	0.328	0.158	0.353	0.101	0.062
JUN 19,84	MAY 22,84	1.91	6.78	0.446	0.238	0.455	0.128	0.095
JUL 17,84	JUN 19,84	1.04	4.13	0.213	0.206	0.174	0.052	0.107
AUG 14,84	JUL 17,84	0.55	6.25	0.182	0.144	0.139	0.038	0.113
SEP 11,84	AUG 14,84	1.75	4.91	0.356	0.192	0.223	0.098	0.099
OCT 9,84	SEP 11,84	1.75	3.37	0.276	0.128	0.102	0.026	0.067
NOV 6,84	OCT 9,84	0.42	2.29	0.155	0.092	0.053	0.025	0.049
DEC 4,84	NOV 6,84	7.85	2.78	0.559	0.275	0.117	0.031	0.088
JAN 2,85	DEC 4,84	2.58	2.23	0.362	0.218	0.066	0.032	D 1.387

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/CUMULATIVE/LO-VOL

#20

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.136	0.024	0.013	0.024	0.0015	0.0024	< 0.00059
JAN 31,84	JAN 3,84	0.211	0.023	0.013	0.034	0.0037	0.0016	< 0.00061
FEB 28,84	JAN 31,84	0.108	0.043	0.020	0.033	0.0039	0.0013	0.00105
MAR 27,84	FEB 28,84	0.179	0.056	0.025	0.012	0.0031	0.0031	0.00185
APR 24,84	MAR 27,84	0.085	0.060	0.038	0.018	0.0026	0.0011	< 0.00066
MAY 22,84	APR 24,84	0.066	0.233	0.307	0.022	0.0092	0.0066	< 0.00066
JUN 19,84	MAY 22,84	0.095	0.356	0.398	0.026	0.0116	0.0031	< 0.00068
JUL 17,84	JUN 19,84	0.050	0.135	0.128	0.020	0.0047	0.0031	0.00373
AUG 14,84	JUL 17,84	0.055	0.133	0.130	0.019	0.0048	0.0021	< 0.00069
SEP 11,84	AUG 14,84	0.090	0.285	0.310	0.049	0.0077	0.0032	0.00256
OCT 9,84	SEP 11,84	0.051	0.066	0.054	0.020	0.0047	0.0061	0.00108
NOV 6,84	OCT 9,84	0.039	0.052	0.031	0.015	0.0028	0.0027	0.00212
DEC 4,84	NOV 6,84	0.105	0.085	0.031	0.024	0.0039	0.0031	0.00262
JAN 2,85	DEC 4,84	0.141	0.040	0.032	0.022	0.0154	0.0012	0.00307

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0012	0.010	0.00053
JAN 31,84	JAN 3,84	< 0.0012	0.016	0.00043
FEB 28,84	JAN 31,84	< 0.0013	0.019	0.00063
MAR 27,84	FEB 28,84	< 0.0012	0.009	0.00049
APR 24,84	MAR 27,84	< 0.0013	0.007	0.00039
MAY 22,84	APR 24,84	< 0.0013	0.010	0.00046
JUN 19,84	MAY 22,84	0.0020	0.016	0.00041
JUL 17,84	JUN 19,84	< 0.0013	0.010	0.00040
AUG 14,84	JUL 17,84	< 0.0014	0.010	0.00062
SEP 11,84	AUG 14,84	< 0.0013	0.016	0.00077
OCT 9,84	SEP 11,84	< 0.0013	0.009	0.00040
NOV 6,84	OCT 9,84	0.0013	0.010	0.00041
DEC 4,84	NOV 6,84	0.0009	0.012	0.00059
JAN 2,85	DEC 4,84	0.0003	0.006	0.00052

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MILTON/CUMULATIVE/LO-VOL

#10

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	1000	1245	87390.0	40116	2	1		
JAN 31,84	JAN 3,84	1245	1000	86370.0	40129	2	1		
FEB 28,84	JAN 31,84	1000	930	62340.0	40142	2	1		
MAR 27,84	FEB 28,84	930	1015	24710.0	40145	2	1	AB	F

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	21.83	3.75	0.893	0.984	0.357	0.102	0.080
JAN 31,84	JAN 3,84	29.25	5.09	1.265	1.551	0.359	0.108	0.101
FEB 28,84	JAN 31,84	26.04	5.61	1.484	1.347	0.507	0.130	0.088
MAR 27,84	FEB 28,84	15.65	5.16	0.951	1.437	0.959	0.253	0.051

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MILTON/CUMULATIVE/LO-VOL

#10

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	> 0.572	0.076	0.037	0.100	0.0092	0.0017	< 0.00057
JAN 31,84	JAN 3,84	> 0.579	0.084	0.036	0.144	0.0133	0.0035	< 0.00058
FEB 28,84	JAN 31,84	0.473	0.137	0.049	D 0.209	0.0152	0.0040	0.00209
MAR 27,84	FEB 28,84	0.577	0.107	0.132	D 0.089	0.0162	D 0.0133	0.01012

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0011	0.033	0.00069
JAN 31,84	JAN 3,84	< 0.0012	0.049	0.00060
FEB 28,84	JAN 31,84	< 0.0016	0.067	0.00077
MAR 27,84	FEB 28,84	< 0.0040	D 0.129	0.00101

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UXBRIDGE/CUMULATIVE/LO-VOL

#11

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 2,84	DEC 6,83	1000	1700	75920.0	40117	2	1		
JAN 31,84	JAN 2,84	1700	1100	80990.0	40130	2	1		
FEB 27,84	JAN 31,84	1100	1730	73460.0	40144	2	1		
MAR 26,84	FEB 27,84	1730	1730	57480.0	40146	2	1		
APR 24,84	MAR 26,84	1730	945	12810.0	40158	2	1	A	F
MAY 22,84	APR 24,84	945	1030	76350.0	40185	2	1		
JUN 19,84	MAY 22,84	1030	1100	80700.0	40216	2	1		
JUL 17,84	JUN 19,84	1100	1000	*****	40217	2	1	A	F
AUG 14,84	JUL 17,84	1000	1430	75320.0	40224	2	1		
SEP 11,84	AUG 14,84	1430	1400	31050.0	40225	2	1	AQ	F
DEC 4,84	NOV 5,84	1100	1030	83520.0	40233	2	1		
JAN 2,85	DEC 4,84	1030	1130	83530.0	40238	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 2,84	DEC 6,83	16.52	2.90	0.685	0.402	0.201	0.039	0.049
JAN 31,84	JAN 2,84	23.87	4.26	1.124	0.488	0.158	0.036	0.083
FEB 27,84	JAN 31,84	16.92	4.59	1.273	0.817	0.370	0.046	0.058
MAR 26,84	FEB 27,84	5.91	D 2.48	0.365	0.478	0.524	0.060	0.026
APR 24,84	MAR 26,84	4.29	9.17	1.815	1.288	4.820	0.195	0.156
MAY 22,84	APR 24,84	2.86	3.67	0.655	0.327	D 2.523	0.283	0.079
JUN 19,84	MAY 22,84	2.97	4.83	0.682	0.440	D 5.489	0.346	0.062
JUL 17,84	JUN 19,84	*****	*****	*****	*****	*****	*****	*****
AUG 14,84	JUL 17,84	0.75	7.63	0.365	0.345	0.509	0.076	0.113
SEP 11,84	AUG 14,84	U 1.29	U 4.75	U 0.483	U 0.483	U 3.916	U 0.242	U 0.161
DEC 4,84	NOV 5,84	8.70	3.56	*****	0.425	0.398	0.060	0.054
JAN 2,85	DEC 4,84	3.69	3.14	0.805	0.503	0.370	0.078	0.054

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UXBRIDGE/CUMULATIVE/LO-VOL

#11

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANESE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 2,84	DEC 6,83	0.237	0.053	0.029	0.057	0.0033	0.0017	< 0.00066
JAN 31,84	JAN 2,84	0.330	0.035	0.020	0.042	0.0049	0.0022	< 0.00062
FEB 27,84	JAN 31,84	0.276	0.071	0.031	0.063	0.0082	0.0020	< 0.00068
MAR 26,84	FEB 27,84	0.352	0.032	0.035	0.014	0.0043	0.0031	0.00139
APR 24,84	MAR 26,84	D 0.449	D 0.344	D 0.174	0.156	D 0.0156	0.0219	< 0.00390
MAY 22,84	APR 24,84	0.111	D 0.738	D 0.877	0.066	D 0.0432	0.0056	0.00236
JUN 19,84	MAY 22,84	0.136	0.654	0.577	0.080	D 0.0304	0.0087	0.00223
JUL 17,84	JUN 19,84	*****	*****	*****	*****	*****	*****	*****
AUG 14,84	JUL 17,84	0.060	0.289	0.164	0.064	0.0066	0.0017	0.00332
SEP 11,84	AUG 14,84	U 0.161	U 0.660	U 0.423	U 0.085	U 0.0177	U 0.0042	U 0.00483
DEC 4,84	NOV 5,84	0.114	0.120	0.068	0.062	0.0078	0.0036	0.00216
JAN 2,85	DEC 4,84	0.215	0.139	0.124	0.036	0.0084	0.0014	0.00287

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 2,84	DEC 6,83	< 0.0013	0.015	0.00066
JAN 31,84	JAN 2,84	< 0.0012	0.024	0.00052
FEB 27,84	JAN 31,84	< 0.0014	0.034	D 0.00084
MAR 26,84	FEB 27,84	< 0.0017	0.007	0.00049
APR 24,84	MAR 26,84	< 0.0078	0.078	0.00117
MAY 22,84	APR 24,84	< 0.0013	0.026	0.00065
JUN 19,84	MAY 22,84	< 0.0012	D 0.048	0.00062
JUL 17,84	JUN 19,84	*****	*****	*****
AUG 14,84	JUL 17,84	< 0.0013	0.015	0.00073
SEP 11,84	AUG 14,84	U 0.0032	U 0.019	U 0.00097
DEC 4,84	NOV 5,84	0.0024	0.024	0.00072
JAN 2,85	DEC 4,84	0.0010	0.016	0.00056

PART V

SOUTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DALHOUSIE MILLS/CUMULATIVE/LO-VOL #16

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	830	800	61580.0	21211	2	1	B	
JAN 31,84	JAN 3,84	830	800	70410.0	21213	2	1	B	
FEB 28,84	JAN 31,84	900	800	62730.0	94001	2	1		
MAR 27,84	FEB 28,84	900	800	67184.0	94005	2	1		
APR 24,84	MAR 27,84	900	800	67058.0	94009	2	1		
MAY 22,84	APR 24,84	900	800	51914.0	94013	2	1	B	
JUN 19,84	MAY 22,84	900	800	67050.0	24352	2	1		
JUL 17,84	JUN 19,84	900	800	65928.0	24369	2	1	B	
AUG 14,84	JUL 17,84	900	800	67338.0	94017	2	1		
SEP 11,84	AUG 14,84	900	800	67079.0	94021	2	1		
OCT 9,84	SEP 11,84	900	900	75380.0	94027	2	1		
NOV 6,84	OCT 9,84	900	800	75960.0	94034	2	1		
DEC 4,84	NOV 6,84	800	800	66880.0	94039	2	1		
JAN 2,85	DEC 4,84	800	800	78580.0	94044	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	10.88	4.22	0.995	0.812	0.153	0.051	0.122
JAN 31,84	JAN 3,84	22.44	6.04	1.403	0.795	0.284	0.053	0.185
FEB 28,84	JAN 31,84	14.24	6.46	1.430	0.972	0.465	0.073	0.207
MAR 27,84	FEB 28,84	8.53	3.83	0.744	0.700	0.485	0.089	0.127
APR 24,84	MAR 27,84	2.59	2.87	0.619	0.425	0.817	0.105	0.075
MAY 22,84	APR 24,84	0.99	3.03	0.563	0.308	0.970	0.139	0.087
JUN 19,84	MAY 22,84	2.41	5.89	0.597	0.336	0.908	0.136	0.231
JUL 17,84	JUN 19,84	1.39	5.73	0.349	0.364	0.800	0.105	0.114
AUG 14,84	JUL 17,84	1.26	6.87	0.446	0.342	0.719	0.115	0.111
SEP 11,84	AUG 14,84	1.64	5.48	0.395	0.380	0.826	0.111	0.127
OCT 9,84	SEP 11,84	1.11	3.61	0.415	0.318	0.615	0.084	0.109
NOV 6,84	OCT 9,84	1.27	4.11	0.698	0.349	0.812	0.117	0.132
DEC 4,84	NOV 6,84	2.24	4.11	0.807	0.553	0.446	0.070	0.164
JAN 2,85	DEC 4,84	7.85	3.82	0.856	0.789	0.328	0.100	0.146

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DALHOUSIE MILLS/CUMULATIVE/LO-VOL #16

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANESE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.516	0.047	0.035	0.075	0.0179	0.0049	< 0.00081
JAN 31,84	JAN 3,84	0.529	0.084	0.044	0.060	0.0533	0.0057	0.00327
FEB 28,84	JAN 31,84	0.542	0.116	0.057	0.104	D 0.0622	0.0064	0.00478
MAR 27,84	FEB 28,84	0.499	0.066	0.056	0.078	0.0246	0.0045	0.00194
APR 24,84	MAR 27,84	0.205	0.160	D 0.100	0.063	0.0164	0.0012	0.00224
MAY 22,84	APR 24,84	0.130	0.280	0.311	D 0.072	0.0221	0.0067	< 0.00096
JUN 19,84	MAY 22,84	0.142	0.260	0.290	0.043	0.0127	0.0027	0.00298
JUL 17,84	JUN 19,84	0.106	0.212	0.228	0.049	0.0083	0.0042	0.00228
AUG 14,84	JUL 17,84	0.104	0.255	0.302	0.088	0.0134	0.0045	0.00371
SEP 11,84	AUG 14,84	0.205	0.171	0.108	0.109	0.0089	0.0045	0.00298
OCT 9,84	SEP 11,84	0.116	0.133	0.122	0.073	D 0.0139	0.0034	0.00372
NOV 6,84	OCT 9,84	0.105	0.178	0.145	0.109	0.0178	0.0045	0.00553
DEC 4,84	NOV 6,84	D 0.250	0.108	0.079	0.102	D 0.0449	0.0040	0.00389
JAN 2,85	DEC 4,84	0.455	0.112	0.114	0.101	D 0.0573	0.0064	0.00535

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	0.0081	0.028	0.00057
JAN 31,84	JAN 3,84	0.0064	0.049	0.00092
FEB 28,84	JAN 31,84	0.0096	0.052	0.00083
MAR 27,84	FEB 28,84	0.0022	0.031	0.00048
APR 24,84	MAR 27,84	0.0060	0.037	0.00037
MAY 22,84	APR 24,84	< 0.0019	0.027	0.00058
JUN 19,84	MAY 22,84	< 0.0015	0.022	D 0.00067
JUL 17,84	JUN 19,84	< 0.0015	0.023	0.00038
AUG 14,84	JUL 17,84	< 0.0015	0.022	0.00052
SEP 11,84	AUG 14,84	< 0.0015	0.031	0.00052
OCT 9,84	SEP 11,84	0.0029	D 0.025	0.00073
NOV 6,84	OCT 9,84	0.0022	0.030	0.00072
DEC 4,84	NOV 6,84	0.0025	0.038	0.00096
JAN 2,85	DEC 4,84	0.0053	0.040	D 0.00070

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOLDEN LAKE/CUMULATIVE/LO-VOL #17

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	730	645	87710.0	21209	2	1		
JAN 31,84	JAN 3,84	650	720	74200.0	21216	2	1	B	
FEB 28,84	JAN 31,84	725	735	80630.0	94004	2	1		
MAR 27,84	FEB 28,84	740	720	91580.0	94008	2	1		
APR 24,84	MAR 27,84	725	725	88080.0	94012	2	1		
MAY 22,84	APR 24,84	730	640	82860.0	94016	2	1	B	
JUN 19,84	MAY 22,84	645	755	80290.0	24355	2	1		
JUL 17,84	JUN 19,84	800	630	79090.0	24367	2	1		
AUG 14,84	JUL 17,84	635	630	79560.0	94020	2	1		
SEP 11,84	AUG 14,84	640	730	54880.0	94025	2	1		
OCT 9,84	SEP 11,84	730	710	84620.0	94030	2	1		
NOV 6,84	OCT 9,84	715	730	85290.0	94035	2	1		
DEC 4,84	NOV 6,84	730	745	82130.0	94040	2	1		
JAN 2,85	DEC 4,84	745	830	89300.0	94045	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIUM UG/M**3	POTASSIUM UG/M**3
JAN 3,84	DEC 6,83	8.97	2.17	0.371	0.285	0.054	0.038	0.051
JAN 31,84	JAN 3,84	10.42	3.54	0.603	0.243	0.100	0.052	0.108
FEB 28,84	JAN 31,84	6.28	3.69	0.695	0.298	0.145	0.043	0.053
MAR 27,84	FEB 28,84	2.86	2.29	0.308	0.213	0.100	0.047	0.035
APR 24,84	MAR 27,84	0.44	1.56	0.202	0.142	0.201	0.045	0.071
MAY 22,84	APR 24,84	0.68	2.38	0.184	0.121	0.219	0.066	0.060
JUN 19,84	MAY 22,84	1.54	4.05	0.196	0.168	0.236	0.077	0.283
JUL 17,84	JUN 19,84	0.51	2.94	0.070	0.133	0.149	0.052	0.044
AUG 14,84	JUL 17,84	0.19	0.97	0.069	0.025	0.133	0.045	0.019
SEP 11,84	AUG 14,84	2.00	4.37	0.155	0.182	0.226	0.052	0.114
OCT 9,84	SEP 11,84	0.87	2.24	0.112	0.154	0.145	0.039	0.092
NOV 6,84	OCT 9,84	0.80	2.46	0.220	0.158	0.209	0.053	0.070
DEC 4,84	NOV 6,84	2.68	2.16	0.301	0.164	0.096	0.032	0.049
JAN 2,85	DEC 4,84	3.64	2.30	0.398	0.453	0.139	0.085	0.067

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOLDEN LAKE/CUMULATIVE/LO-VOL #17

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANESE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.220	0.019	0.013	0.031	0.0029	0.0015	0.00285
JAN 31,84	JAN 3,84	0.256	0.061	0.016	0.029	0.0061	0.0020	< 0.00067
FEB 28,84	JAN 31,84	0.174	0.037	0.016	0.048	0.0056	0.0016	0.00161
MAR 27,84	FEB 28,84	0.186	0.047	0.020	0.017	0.0044	0.0022	0.00087
APR 24,84	MAR 27,84	0.094	0.089	0.038	0.019	0.0034	< 0.0006	< 0.00057
MAY 22,84	APR 24,84	0.063	0.123	0.122	0.020	0.0054	0.0028	< 0.00060
JUN 19,84	MAY 22,84	0.065	0.179	0.196	0.017	0.0069	0.0035	0.00187
JUL 17,84	JUN 19,84	0.041	0.119	0.090	0.013	0.0044	0.0029	0.00126
AUG 14,84	JUL 17,84	0.009	0.136	0.126	0.019	0.0038	0.0023	0.00377
SEP 11,84	AUG 14,84	0.096	0.089	0.122	0.067	0.0064	0.0055	0.00146
OCT 9,84	SEP 11,84	0.041	0.058	0.039	0.016	0.0041	0.0028	0.00331
NOV 6,84	OCT 9,84	0.050	0.069	0.051	0.025	0.0047	0.0029	0.00211
DEC 4,84	NOV 6,84	0.073	0.057	0.039	0.030	0.0030	0.0027	0.00256
JAN 2,85	DEC 4,84	0.327	0.044	0.030	0.030	0.0039	0.0046	0.00325

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0011	0.013	0.00046
JAN 31,84	JAN 3,84	< 0.0013	0.017	0.00051
FEB 28,84	JAN 31,84	0.0019	0.017	0.00047
MAR 27,84	FEB 28,84	< 0.0011	0.011	0.00035
APR 24,84	MAR 27,84	0.0017	0.006	0.00017
MAY 22,84	APR 24,84	< 0.0012	0.009	0.00036
JUN 19,84	MAY 22,84	< 0.0012	0.009	0.00044
JUL 17,84	JUN 19,84	< 0.0013	0.008	0.00032
AUG 14,84	JUL 17,84	< 0.0013	0.007	0.00035
SEP 11,84	AUG 14,84	< 0.0018	0.013	0.00046
OCT 9,84	SEP 11,84	0.0014	0.009	0.00045
NOV 6,84	OCT 9,84	0.0022	0.007	0.00042
DEC 4,84	NOV 6,84	0.0006	0.008	0.00067
JAN 2,85	DEC 4,84	0.0015	0.013	0.00050

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SMITH'S FALLS/CUMULATIVE/LO-VOL #15

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	1500	930	96090.0	21212	2	1		
JAN 31,84	JAN 3,84	930	1135	95820.0	21214	2	1		
FEB 28,84	JAN 31,84	1135	1000	91380.0	94002	2	1		
MAR 27,84	FEB 28,84	1000	940	90470.0	94006	2	1		
APR 24,84	MAR 27,84	940	900	63070.0	94010	2	1		
MAY 22,84	APR 24,84	945	1140	95000.0	94014	2	1		
JUN 19,84	MAY 22,84	1140	940	85190.0	24354	2	1		
JUL 17,84	JUN 19,84	940	900	69040.0	24368	2	1	A	
AUG 14,84	JUL 17,84	945	1045	79110.0	94018	2	1		
SEP 11,84	AUG 14,84	1045	930	87690.0	94022	2	1		
OCT 9,84	SEP 11,84	930	1045	93460.0	94029	2	1	F	
NOV 6,84	OCT 9,84	1045	1010	85600.0	94033	2	1		
DEC 4,84	NOV 6,84	1010	915	63270.0	94038	2	1		
JAN 2,85	DEC 4,84	915	1100	72790.0	94043	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	12.49	2.91	0.715	0.682	0.280	0.130	0.086
JAN 31,84	JAN 3,84	18.92	5.22	1.109	0.877	0.179	0.054	0.138
FEB 28,84	JAN 31,84	11.78	4.51	0.974	0.711	0.416	0.127	0.085
MAR 27,84	FEB 28,84	5.42	2.85	0.514	0.453	0.555	0.235	0.069
APR 24,84	MAR 27,84	*****	2.38	0.499	0.285	0.488	0.130	0.091
MAY 22,84	APR 24,84	1.10	2.87	0.471	0.211	1.623	D 0.736	0.074
JUN 19,84	MAY 22,84	2.72	6.10	0.628	0.329	2.440	D 1.007	0.100
JUL 17,84	JUN 19,84	1.30	4.64	0.384	0.290	1.825	D 0.725	0.149
AUG 14,84	JUL 17,84	0.40	6.89	0.322	0.240	0.608	0.200	0.107
SEP 11,84	AUG 14,84	2.05	4.56	0.396	0.291	0.704	0.244	0.074
OCT 9,84	SEP 11,84	*****	*****	*****	*****	*****	*****	*****
NOV 6,84	OCT 9,84	2.57	8.24	0.835	0.485	1.243	0.367	0.137
DEC 4,84	NOV 6,84	3.74	2.81	0.644	0.300	0.534	D 0.218	0.075
JAN 2,85	DEC 4,84	6.64	3.13	0.824	0.783	0.311	0.118	0.082

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SMITH'S FALLS/CUMULATIVE/LO-VOL #15

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANESE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.479	0.045	0.030	0.094	0.0104	0.0019	< 0.00052
JAN 31,84	JAN 3,84	0.678	0.049	0.031	0.053	0.0177	0.0042	0.00188
FEB 28,84	JAN 31,84	0.482	0.077	0.044	0.057	0.0131	0.0027	0.00197
MAR 27,84	FEB 28,84	0.387	0.040	0.035	0.034	0.0099	0.0028	0.00144
APR 24,84	MAR 27,84	0.147	0.086	0.050	0.042	0.0071	0.0013	0.00127
MAY 22,84	APR 24,84	0.089	0.282	0.372	0.021	0.0190	0.0026	0.00137
JUN 19,84	MAY 22,84	0.123	0.381	0.462	0.035	0.0217	0.0033	0.00293
JUL 17,84	JUN 19,84	0.065	0.272	0.223	0.049	0.0152	0.0055	0.00217
AUG 14,84	JUL 17,84	0.060	0.239	0.238	0.071	0.0145	0.0032	0.00569
SEP 11,84	AUG 14,84	0.145	0.168	0.157	0.090	0.0103	0.0080	0.00114
OCT 9,84	SEP 11,84	*****	*****	*****	*****	*****	*****	*****
NOV 6,84	OCT 9,84	0.161	0.287	0.248	0.148	0.0175	0.0047	0.00304
DEC 4,84	NOV 6,84	0.115	0.092	0.073	0.061	0.0079	0.0027	0.00348
JAN 2,85	DEC 4,84	0.470	0.089	0.069	0.066	0.0103	0.0038	0.00412

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	0.0026	0.015	0.00040
JAN 31,84	JAN 3,84	0.0026	0.033	0.00071
FEB 28,84	JAN 31,84	0.0033	0.026	0.00068
MAR 27,84	FEB 28,84	0.0028	0.015	0.00035
APR 24,84	MAR 27,84	0.0040	0.020	0.00024
MAY 22,84	APR 24,84	< 0.0011	0.015	0.00037
JUN 19,84	MAY 22,84	< 0.0012	0.016	0.00041
JUL 17,84	JUN 19,84	< 0.0014	0.018	0.00036
AUG 14,84	JUL 17,84	< 0.0013	0.016	0.00051
SEP 11,84	AUG 14,84	< 0.0011	0.022	0.00051
OCT 9,84	SEP 11,84	*****	*****	*****
NOV 6,84	OCT 9,84	0.0013	0.032	0.00064
DEC 4,84	NOV 6,84	0.0008	0.015	0.00057
JAN 2,85	DEC 4,84	0.0025	0.018	0.00055

PART VI

NORTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ATTAWAPISKAT/CUMULATIVE/LO-VOL #28

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 31,84	JAN 3,84	1345	945	52571.0	35162	2	1		
FEB 28,84	JAN 31,84	1200	1200	*****	35154	2	1	F	F

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 31,84	JAN 3,84	0.32	1.38	0.029	0.456	0.104	0.042	0.181
FEB 28,84	JAN 31,84	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ATTAWAPISKAT/CUMULATIVE/LO-VOL #28

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 31,84	JAN 3,84	0.238	0.022	0.009	0.012	0.0029	0.0038	< 0.00095
FEB 28,84	JAN 31,84	*****	*****	*****	*****	*****	*****	*****

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 31,84	JAN 3,84	< 0.0019	0.019	0.00057
FEB 28,84	JAN 31,84	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOWGANDA/CUMULATIVE/LO-VOL

#25

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	1115	1300	77899.5	35152	2	1		
JAN 31,84	JAN 3,84	1300	1045	2950.0	35160	2	1	AE	F
FEB 28,84	JAN 31,84	1045	857	89785.0	35168	2	1		
MAR 27,84	FEB 28,84	857	952	80356.0	35170	2	1		
APR 24,84	MAR 27,84	952	915	80661.0	35184	2	1		
MAY 22,84	APR 24,84	915	1200	9093.0	35185	2	1	Q	F
JUN 19,84	MAY 22,84	1200	930	92305.0	35229	2	1		
JUL 17,84	JUN 19,84	930	925	82824.0	35230	2	1		
AUG 14,84	JUL 17,84	925	1700	91287.0	35231	2	1		
SEP 11,84	AUG 14,84	1700	1015	94311.0	35232	2	1		
DEC 4,84	NOV 6,84	1450	1630	90615.0	35287	2	1		
JAN 2,85	DEC 4,84	1630	1137	78498.0	35300	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	6.03	1.96	0.154	0.270	0.023	0.032	0.026
JAN 31,84	JAN 3,84	*****	U 5.09	U 2.458	U 1.864	U 0.932	U 0.085	U 0.085
FEB 28,84	JAN 31,84	6.13	3.03	0.476	0.167	0.038	0.022	0.036
MAR 27,84	FEB 28,84	5.64	2.46	0.165	0.112	0.048	0.047	0.040
APR 24,84	MAR 27,84	6.49	1.67	0.059	0.093	0.102	0.045	0.031
MAY 22,84	APR 24,84	D 39.22	D 24.74	1.815	D 1.320	1.424	D 0.588	D 0.302
JUN 19,84	MAY 22,84	1.91	2.98	0.168	0.173	0.171	0.054	0.054
JUL 17,84	JUN 19,84	0.93	1.33	0.121	0.169	0.115	0.039	0.048
AUG 14,84	JUL 17,84	D 2.05	2.57	0.093	0.153	0.130	0.051	0.049
SEP 11,84	AUG 14,84	3.46	3.90	0.220	0.191	0.156	0.069	0.056
DEC 4,84	NOV 6,84	7.54	1.88	0.353	0.270	0.145	0.033	0.025
JAN 2,85	DEC 4,84	4.12	1.47	0.197	0.446	0.027	0.065	0.035

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GONGANDA/CUMULATIVE/LO-VOL

#25

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANESE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.167	0.016	0.007	0.026	0.0019	0.0026	0.00103
JAN 31,84	JAN 3,84	U 0.763	U 0.281	U 0.085	U 0.044	U 0.0170	U 0.0170	U 0.01695
FEB 28,84	JAN 31,84	0.081	0.035	0.028	0.016	0.0033	0.0056	< 0.00056
MAR 27,84	FEB 28,84	0.165	0.055	0.097	0.020	0.0019	0.0044	< 0.00062
APR 24,84	MAR 27,84	0.090	0.087	0.089	0.035	0.0025	0.0031	< 0.00062
MAY 22,84	APR 24,84	D 0.495	D 1.540	D 1.358	D 0.093	D 0.0385	D 0.0440	< 0.00550
JUN 19,84	MAY 22,84	0.043	0.136	0.114	0.018	0.0060	0.0087	0.00163
JUL 17,84	JUN 19,84	0.024	0.093	0.067	0.010	0.0048	0.0030	0.00121
AUG 14,84	JUL 17,84	0.033	0.128	0.147	0.019	0.0060	0.0038	0.00088
SEP 11,84	AUG 14,84	0.130	0.165	0.184	0.025	0.0069	0.0053	0.00085
DEC 4,84	NOV 6,84	0.116	0.040	0.026	0.010	0.0028	0.0021	0.00177
JAN 2,85	DEC 4,84	0.309	0.029	0.019	0.009	0.0019	0.0034	0.00357

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0013	0.017	0.00115
JAN 31,84	JAN 3,84	U 0.0339	U 0.034	U 0.00170
FEB 28,84	JAN 31,84	< 0.0011	0.013	0.00045
MAR 27,84	FEB 28,84	< 0.0012	0.016	0.00075
APR 24,84	MAR 27,84	< 0.0012	0.019	0.00118
MAY 22,84	APR 24,84	< 0.0110	D 0.088	D 0.00605
JUN 19,84	MAY 22,84	< 0.0011	0.010	0.00076
JUL 17,84	JUN 19,84	< 0.0012	0.013	D 0.00072
AUG 14,84	JUL 17,84	< 0.0011	0.013	0.00099
SEP 11,84	AUG 14,84	< 0.0011	0.012	0.00074
DEC 4,84	NOV 6,84	0.0003	0.010	0.00044
JAN 2,85	DEC 4,84	< 0.0003	0.008	0.00048

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KILLARNEY/CUMULATIVE/LO-VOL

#23

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	820	1600	86691.0	35150	2	1	B	
FEB 10,84	JAN 3,84	1600	1600	117855.0	35158	2	1	B	Z
FEB 28,84	FEB 10,84	1600	1330	55537.0	35166	2	1		Z
MAR 27,84	FEB 28,84	1330	1700	89258.0	35172	2	1		
APR 24,84	MAR 27,84	1700	1100	19972.0	35178	2	1	AB	F
MAY 29,84	APR 24,84	1100	1235	69729.0	35186	2	1	AQ	Z
JUN 19,84	MAY 29,84	1235	1125	54163.0	35195	2	1		Z
JUL 17,84	JUN 19,84	1125	900	75068.0	35200	2	1		
AUG 15,84	JUL 17,84	900	1335	16793.0	35208	2	1	A	F
SEP 11,84	AUG 15,84	1335	830	77287.0	35223	2	1		
OCT 10,84	SEP 11,84	830	1145	101360.0	35248	2	1		
NOV 6,84	OCT 10,84	1145	1015	56741.0	35264	2	1		
DEC 6,84	NOV 6,84	1015	1130	74655.0	35284	2	1		Z
JAN 2,85	DEC 6,84	1130	1000	80846.0	35301	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	U 18.85	2.45	0.300	0.196	0.027	0.027	0.046
FEB 10,84	JAN 3,84	U 23.19	4.14	0.670	0.259	0.085	0.034	0.091
FEB 28,84	FEB 10,84	7.92	4.14	0.909	0.252	0.133	0.029	0.059
MAR 27,84	FEB 28,84	D 12.25	3.42	0.241	0.163	0.078	0.059	0.067
APR 24,84	MAR 27,84	8.93	1.88	0.288	0.300	0.646	0.033	<T 0.038
MAY 29,84	APR 24,84	2.99	2.98	0.452	0.215	0.225	0.071	0.061
JUN 19,84	MAY 29,84	2.37	4.57	0.508	0.277	0.328	0.097	0.078
JUL 17,84	JUN 19,84	1.09	2.60	0.250	0.200	0.205	0.055	0.103
AUG 15,84	JUL 17,84	0.60	4.47	0.342	D 0.506	0.497	0.143	U 1.578
SEP 11,84	AUG 15,84	3.41	4.79	0.382	0.298	0.345	0.112	0.078
OCT 10,84	SEP 11,84	1.69	3.75	0.311	0.153	0.151	0.042	0.052
NOV 6,84	OCT 10,84	D 2.79	2.47	0.396	0.229	0.129	0.061	0.075
DEC 6,84	NOV 6,84	8.13	2.28	0.700	0.516	0.222	0.058	0.104
JAN 2,85	DEC 6,84	8.66	2.13	0.445	0.587	0.098	0.086	0.046

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KILLARNEY/CUMULATIVE/LO-VOL

#23

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANESE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.150	0.014	D 0.003	0.036	0.0015	D 0.0063	< 0.00058
FEB 10,84	JAN 3,84	0.178	0.034	0.014	0.026	0.0038	0.0072	0.00170
FEB 28,84	FEB 10,84	0.081	0.102	0.045	0.041	0.0054	0.0036	0.00450
MAR 27,84	FEB 28,84	0.196	0.053	0.050	0.013	0.0034	0.0050	0.00168
APR 24,84	MAR 27,84	D 0.188	0.103	0.069	0.028	0.0050	0.0065	0.00401
MAY 29,84	APR 24,84	0.065	0.126	0.126	0.023	0.0065	0.0043	< 0.00072
JUN 19,84	MAY 29,84	0.092	0.222	0.285	0.025	0.0092	0.0042	0.00277
JUL 17,84	JUN 19,84	0.043	0.138	0.133	0.023	0.0053	0.0040	0.00107
AUG 15,84	JUL 17,84	D 0.149	0.342	0.457	0.061	0.0149	D 0.0149	0.02680
SEP 11,84	AUG 15,84	0.162	0.248	0.202	0.027	0.0097	0.0065	0.00129
OCT 10,84	SEP 11,84	0.049	0.096	0.094	0.022	0.0035	0.0044	0.00079
NOV 6,84	OCT 10,84	0.066	0.062	0.045	0.011	0.0044	0.0026	0.00264
DEC 6,84	NOV 6,84	0.121	0.111	0.058	0.019	0.0054	0.0019	0.00121
JAN 2,85	DEC 6,84	0.374	0.057	0.035	0.016	0.0010	0.0058	0.00322

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0012	0.010	0.00138
FEB 10,84	JAN 3,84	< 0.0008	0.021	0.00089
FEB 28,84	FEB 10,84	< 0.0018	0.020	0.00058
MAR 27,84	FEB 28,84	< 0.0011	0.011	0.00078
APR 24,84	MAR 27,84	< 0.0050	0.013	0.00125
MAY 29,84	APR 24,84	< 0.0014	0.008	0.00072
JUN 19,84	MAY 29,84	< 0.0018	0.012	0.00074
JUL 17,84	JUN 19,84	< 0.0013	0.008	0.00027
AUG 15,84	JUL 17,84	< 0.0060	D 0.027	0.00137
SEP 11,84	AUG 15,84	< 0.0013	0.019	0.00091
OCT 10,84	SEP 11,84	< 0.0010	0.011	0.00054
NOV 6,84	OCT 10,84	0.0012	0.022	0.00058
DEC 6,84	NOV 6,84	0.0008	0.016	0.00035
JAN 2,85	DEC 6,84	0.0009	0.009	0.00049

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MATTAWA/CUMULATIVE/LO-VOL

#22

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 4,84	DEC 6,83	745	1420	84635.0	35151	2	1		
FEB 2,84	JAN 4,84	1420	1130	67162.0	35159	2	1	BE	
FEB 28,84	FEB 2,84	1130	730	68024.0	35167	2	1		Z
MAR 27,84	FEB 28,84	730	1630	67400.0	35171	2	1		
APR 24,84	MAR 27,84	1630	1820	79467.0	35177	2	1		
MAY 23,84	APR 24,84	1820	730	79141.0	35183	2	1	B	
JUN 19,84	MAY 23,84	730	1400	74864.0	35194	2	1		
JUL 19,84	JUN 19,84	1400	945	83873.0	35201	2	1		Z
AUG 14,84	JUL 19,84	945	1240	74418.0	35207	2	1		Z
SEP 11,84	AUG 14,84	1240	1145	81981.0	35224	2	1		
OCT 9,84	SEP 11,84	1145	1330	88862.0	35246	2	1		
NOV 6,84	OCT 9,84	1330	1130	85863.0	35269	2	1		
DEC 8,84	NOV 6,84	1130	1230	100336.0	35282	2	1		Z
JAN 2,85	DEC 8,84	1230	1430	79972.0	35296	2	1		Z

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 4,84	DEC 6,83		2.30	0.284	0.201	< 0.012	0.003	0.047
FEB 2,84	JAN 4,84	<T 0.02	3.39	0.432	0.283	0.080	0.029	0.082
FEB 28,84	FEB 2,84	8.28	3.45	0.474	0.301	0.123	D 0.060	D 0.077
MAR 27,84	FEB 28,84	5.64	3.00	0.241	D 0.297	D 0.358	D 0.392	0.096
APR 24,84	MAR 27,84	2.29	1.95	0.132	0.101	0.108	0.045	0.060
MAY 23,84	APR 24,84	2.17	2.78	0.171	0.171	0.270	0.210	0.060
JUN 19,84	MAY 23,84	2.81	3.97	0.224	0.240	0.379	D 0.413	0.104
JUL 19,84	JUN 19,84	0.30	0.12	0.030	0.089	0.062	0.010	0.033
AUG 14,84	JUL 19,84	0.74	4.77	0.107	0.269	0.251	0.188	0.114
SEP 11,84	AUG 14,84	1.91	3.63	0.131	0.214	0.189	0.065	0.113
OCT 9,84	SEP 11,84	0.90	2.31	0.132	0.146	0.143	0.052	0.084
NOV 6,84	OCT 9,84	1.61	3.03	0.140	0.128	0.048	0.257	0.052
DEC 8,84	NOV 6,84	5.71	2.42	0.319	0.279	0.215	0.159	0.080
JAN 2,85	DEC 8,84	3.88	2.25	0.244	0.575	0.100	0.113	0.134

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MATTAWA/CUMULATIVE/LO-VOL

#22

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 4,84	DEC 6,83	0.186	0.021	0.007	0.035	D 0.0033	0.0030	< 0.00059
FEB 2,84	JAN 4,84	0.272	0.045	0.042	0.041	0.0052	0.0030	0.00149
FEB 28,84	FEB 2,84	0.154	D 0.188	D 0.096	0.065	0.0081	0.0044	< 0.00074
MAR 27,84	FEB 28,84	D 0.349	D 0.803	D 0.442	0.030	D 0.0237	0.0067	0.00223
APR 24,84	MAR 27,84	0.101	0.127	0.049	0.021	0.0044	0.0016	0.00126
MAY 23,84	APR 24,84	0.063	0.493	0.442	0.030	0.0164	0.0032	0.00101
JUN 19,84	MAY 23,84	0.083	D 0.944	D 1.043	0.027	D 0.0307	0.0051	0.01135
JUL 19,84	JUN 19,84	0.021	0.023	0.036	0.003	D 0.0010	0.0021	< 0.00060
AUG 14,84	JUL 19,84	0.040	D 0.615	0.595	0.042	0.0134	0.0067	0.00403
SEP 11,84	AUG 14,84	D 0.076	0.197	0.116	0.035	0.0067	0.0043	0.00244
OCT 9,84	SEP 11,84	0.045	0.174	0.126	0.033	0.0056	0.0039	0.00788
NOV 6,84	OCT 9,84	0.044	0.120	0.077	D 0.033	0.0047	0.0041	0.00175
DEC 8,84	NOV 6,84	0.107	D 0.345	D 0.327	D 0.031	0.0095	0.0023	0.00100
JAN 2,85	DEC 8,84	0.413	0.111	0.093	0.038	0.0056	0.0035	0.00250

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 4,84	DEC 6,83	< 0.0012	0.020	0.00130
FEB 2,84	JAN 4,84	< 0.0015	0.022	0.00112
FEB 28,84	FEB 2,84	< 0.0015	0.026	0.00096
MAR 27,84	FEB 28,84	< 0.0015	0.021	0.00082
APR 24,84	MAR 27,84	< 0.0013	0.009	0.00031
MAY 23,84	APR 24,84	< 0.0013	0.013	0.00057
JUN 19,84	MAY 23,84	0.0020	0.012	0.00053
JUL 19,84	JUN 19,84	< 0.0012	0.002	0.00010
AUG 14,84	JUL 19,84	< 0.0013	0.011	0.00040
SEP 11,84	AUG 14,84	< 0.0012	0.018	0.00091
OCT 9,84	SEP 11,84	< 0.0011	0.012	0.00073
NOV 6,84	OCT 9,84	0.0007	0.009	0.00038
DEC 8,84	NOV 6,84	0.0009	0.016	0.00048
JAN 2,85	DEC 8,84	< 0.0003	0.014	0.00081

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MCKELLAR/CUMULATIVE/LO-VOL

#21

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 9,83	810	1330	82113.0	35148	2	1	B	Z
JAN 31,84	JAN 3,84	1330	800	89991.0	35156	2	1	BE	
FEB 28,84	JAN 31,84	800	800	94839.0	35164	2	1		
MAR 27,84	FEB 28,84	900	900	182400.0	35174	2	1		F
APR 24,84	MAR 27,84	900	800	91415.0	35180	2	1		
MAY 22,84	APR 24,84	800	800	90647.0	35187	2	1		
JUN 22,84	MAY 22,84	1200	1200	75134.0	35193	2	1	A	Z
JUL 17,84	JUN 22,84	1305	810	55244.0	35202	2	1	A	Z
AUG 14,84	JUL 17,84	810	1030	62764.0	35205	2	1	B	
SEP 11,84	AUG 14,84	1030	800	40664.0	35220	2	1	A	
OCT 9,84	SEP 11,84	800	800	*****	35245	2	1	A	F
NOV 6,84	OCT 9,84	810	800	53316.0	35267	2	1	B	
DEC 4,84	NOV 6,84	810	830	71628.0	35286	2	1		
JAN 2,85	DEC 4,84	840	830	150.0	35298	2	1	AC	F

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 9,83	9.10	2.38	0.402	0.445	< 0.012	0.020	0.030
JAN 31,84	JAN 3,84	<W 0.02	3.08	0.631	0.544	0.054	0.036	0.047
FEB 28,84	JAN 31,84	9.63	3.03	0.722	0.348	0.090	0.020	0.032
MAR 27,84	FEB 28,84	6.16	1.43	0.154	0.101	0.035	0.023	0.021
APR 24,84	MAR 27,84	1.88	1.83	0.167	0.088	0.100	0.028	0.036
MAY 22,84	APR 24,84	1.73	2.68	0.400	0.182	0.329	0.083	0.050
JUN 22,84	MAY 22,84	2.62	3.93	0.423	0.240	0.359	0.098	0.080
JUL 17,84	JUN 22,84	1.06	4.16	0.285	0.235	0.278	0.063	0.140
AUG 14,84	JUL 17,84	0.58	4.62	0.163	0.183	0.210	0.049	0.056
SEP 11,84	AUG 14,84	<T 0.08	D 9.10	0.455	D 0.910	0.305	0.058	> 1.230
OCT 9,84	SEP 11,84	*****	*****	*****	*****	*****	*****	*****
NOV 6,84	OCT 9,84	1.56	2.67	0.314	0.197	0.093	0.054	0.089
DEC 4,84	NOV 6,84	2.37	D 0.42	0.119	0.105	0.104	0.013	<T 0.007
JAN 2,85	DEC 4,84	U 133.30	U1150.00	U141.630	U343.300	U 64.000	U 38.330	U 23.330

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MCKELLAR/CUMULATIVE/LO-VOL

#21

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 9,83	0.317	0.019	0.007	0.022	0.0016	0.0016	< 0.00061
JAN 31,84	JAN 3,84	0.445	0.028	0.011	0.027	0.0033	0.0011	0.00145
FEB 28,84	JAN 31,84	0.250	0.035	0.020	0.031	0.0032	0.0016	0.00084
MAR 27,84	FEB 28,84	0.129	0.024	0.014	0.008	0.0014	0.0016	0.00071
APR 24,84	MAR 27,84	0.079	0.057	0.056	0.024	0.0022	0.0022	< 0.00055
MAY 22,84	APR 24,84	0.061	0.176	0.208	0.023	0.0072	0.0017	< 0.00055
JUN 22,84	MAY 22,84	0.090	0.212	0.224	0.024	0.0080	0.0011	0.00106
JUL 17,84	JUN 22,84	0.059	0.163	0.096	0.037	0.0063	0.0054	0.00145
AUG 14,84	JUL 17,84	0.048	0.152	0.167	0.025	0.0064	0.0024	0.00717
SEP 11,84	AUG 14,84	0.129	0.109	0.092	0.022	0.0061	0.0049	0.00320
OCT 9,84	SEP 11,84	*****	*****	*****	*****	*****	*****	*****
NOV 6,84	OCT 9,84	0.080	0.049	0.049	0.016	0.0038	0.0019	0.00281
DEC 4,84	NOV 6,84	D 0.028	0.020	0.009	0.013	0.0011	0.0013	0.00126
JAN 2,85	DEC 4,84	U201.700	U 33.000	U 20.530	U 11.670	U 2.0000	U 2.6000	U 1.46700

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 9,83	< 0.0012	0.007	0.00049
JAN 31,84	JAN 3,84	< 0.0011	0.013	0.00064
FEB 28,84	JAN 31,84	< 0.0011	0.018	0.00061
MAR 27,84	FEB 28,84	< 0.0005	0.005	0.00030
APR 24,84	MAR 27,84	< 0.0011	0.010	0.00049
MAY 22,84	APR 24,84	< 0.0011	0.014	0.00039
JUN 22,84	MAY 22,84	< 0.0013	0.013	0.00024
JUL 17,84	JUN 22,84	< 0.0018	0.014	0.00036
AUG 14,84	JUL 17,84	< 0.0016	0.011	0.00056
SEP 11,84	AUG 14,84	< 0.0025	0.033	0.00123
OCT 9,84	SEP 11,84	*****	*****	*****
NOV 6,84	OCT 9,84	0.0013	0.018	0.00053
DEC 4,84	NOV 6,84	0.0003	0.003	0.00031
JAN 2,85	DEC 4,84	U 0.2667	U 6.667	U 0.26670

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MOONBEAM/CUMULATIVE/LO-VOL

#27

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 4,84	DEC 6,83	1500	1526	63630.0	35153	2	1		
FEB 7,84	JAN 4,84	1526	1545	*****	35161	2	1	AF	FZ
FEB 28,84	FEB 7,84	1545	1450	16870.0	35169	2	1	A	FZ
MAR 28,84	FEB 28,84	1605	1625	*****	35173	2	1	A	F
APR 24,84	MAR 28,84	1625	1310	55761.0	35179	2	1	A	
MAY 24,84	APR 24,84	1310	1458	80567.0	35190	2	1		Z
JUN 19,84	MAY 24,84	1458	1430	67755.0	35196	2	1		Z
JUL 17,84	JUN 19,84	1430	2030	73978.0	35199	2	1		
AUG 14,84	JUL 17,84	2030	2000	71731.0	35209	2	1		
SEP 11,84	AUG 14,84	2000	1416	66789.0	35219	2	1		
OCT 10,84	SEP 11,84	1416	1440	75190.0	35243	2	1		
NOV 6,84	OCT 10,84	1440	1320	70838.0	35266	2	1		
DEC 4,84	NOV 6,84	1320	1340	74448.0	35283	2	1		
JAN 3,85	DEC 4,84	1340	1415	83256.0	35299	2	1		Z

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 4,84	DEC 6,83	3.88	*****	*****	*****	< 0.016	0.046	0.024
FEB 7,84	JAN 4,84	*****	*****	*****	*****	*****	*****	*****
FEB 28,84	FEB 7,84	7.61	4.89	0.563	0.445	0.181	< 0.015	0.059
MAR 28,84	FEB 28,84	*****	*****	*****	*****	*****	*****	*****
APR 24,84	MAR 28,84	2.33	1.35	0.092	0.251	0.772	D 0.221	0.054
MAY 24,84	APR 24,84	2.01	2.05	0.102	0.130	0.740	0.177	0.050
JUN 19,84	MAY 24,84	0.54	2.10	0.085	0.140	0.674	0.174	0.041
JUL 17,84	JUN 19,84	0.16	1.22	0.027	0.068	0.518	D 0.148	0.041
AUG 14,84	JUL 17,84	0.30	1.46	0.038	0.153	0.811	0.223	0.098
SEP 11,84	AUG 14,84	0.40	3.07	0.101	0.180	D 0.684	0.178	0.049
OCT 10,84	SEP 11,84	0.89	2.06	0.116	0.146	D 0.278	0.063	0.050
NOV 6,84	OCT 10,84	1.36	2.58	0.078	0.106	D 0.343	0.248	0.056
DEC 4,84	NOV 6,84	1.36	1.85	0.222	0.289	D 0.476	0.115	0.024
JAN 3,85	DEC 4,84	1.68	1.26	0.126	0.438	0.098	0.084	0.072

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MOONBEAM/CUMULATIVE/LO-VOL

#27

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANESE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 4,84	DEC 6,83	0.244	0.013	0.007	0.015	0.0013	0.0020	< 0.00079
FEB 7,84	JAN 4,84	*****	*****	*****	*****	*****	*****	*****
FEB 28,84	FEB 7,84	0.178	0.055	0.031	0.025	0.0047	0.0047	< 0.00296
MAR 28,84	FEB 28,84	*****	*****	*****	*****	*****	*****	*****
APR 24,84	MAR 28,84	0.117	0.212	D 0.285	0.020	0.0072	< 0.0009	< 0.00090
MAY 24,84	APR 24,84	0.078	0.192	0.233	0.006	0.0068	0.0019	< 0.00062
JUN 19,84	MAY 24,84	0.055	0.222	0.270	0.010	0.0066	0.0019	0.00044
JUL 17,84	JUN 19,84	0.041	0.204	0.242	0.006	0.0047	0.0038	< 0.00068
AUG 14,84	JUL 17,84	0.052	0.319	0.484	0.014	0.0091	0.0049	0.00279
SEP 11,84	AUG 14,84	0.127	0.213	0.218	0.010	0.0082	0.0022	0.00120
OCT 10,84	SEP 11,84	0.086	0.081	0.105	0.007	0.0033	0.0020	< 0.00066
NOV 6,84	OCT 10,84	0.056	0.088	0.082	0.008	0.0042	0.0064	0.00282
DEC 4,84	NOV 6,84	0.134	0.089	0.109	0.018	0.0040	0.0015	0.00188
JAN 3,85	DEC 4,84	0.306	0.028	0.039	0.011	0.0024	0.0038	0.00216

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 4,84	DEC 6,83	< 0.0016	0.006	0.00071
FEB 7,84	JAN 4,84	*****	*****	*****
FEB 28,84	FEB 7,84	< 0.0059	0.012	0.00047
MAR 28,84	FEB 28,84	*****	*****	*****
APR 24,84	MAR 28,84	< 0.0018	0.007	0.00018
MAY 24,84	APR 24,84	< 0.0012	0.006	0.00031
JUN 19,84	MAY 24,84	< 0.0015	0.004	0.00037
JUL 17,84	JUN 19,84	< 0.0014	0.005	0.00020
AUG 14,84	JUL 17,84	< 0.0014	0.008	0.00032
SEP 11,84	AUG 14,84	< 0.0015	0.004	0.00030
OCT 10,84	SEP 11,84	< 0.0013	0.006	0.00027
NOV 6,84	OCT 10,84	< 0.0003	0.015	0.00054
DEC 4,84	NOV 6,84	0.0004	0.010	0.00035
JAN 3,85	DEC 4,84	0.0004	0.009	0.00035

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TURKEY LAKE/CUMULATIVE/LO-VOL #37

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 4,84	DEC 6,83	1200	1100	78376.0	35147	2	1	B	
JAN 31,84	JAN 4,84	1100	1250	75514.0	35155	2	1	E	
FEB 28,84	JAN 31,84	1250	1100	76550.0	35163	2	1		
MAR 27,84	FEB 28,84	1130	1130	70152.0	35176	2	1		
APR 24,84	MAR 27,84	1145	1115	67189.0	35182	2	1	C	
MAY 22,84	APR 24,84	1115	830	71960.0	35189	2	1		
JUN 19,84	MAY 22,84	900	1110	71614.0	35197	2	1		
JUL 17,84	JUN 19,84	1110	1010	68988.0	35198	2	1	B	
AUG 14,84	JUL 17,84	1030	1045	62025.0	35204	2	1		
SEP 11,84	AUG 14,84	1045	1515	70794.0	35222	2	1	B	
OCT 9,84	SEP 11,84	1540	1305	70416.0	35244	2	1		
NOV 6,84	OCT 9,84	1305	1130	72327.0	35265	2	1		
DEC 4,84	NOV 6,84	1200	1100	72004.0	35281	2	1		
JAN 1,85	DEC 4,84	1100	1200	70428.0	35295	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 4,84	DEC 6,83	3.57	1.40	0.207	0.128	< 0.013	0.019	0.013
JAN 31,84	JAN 4,84	<N 0.02	1.85	0.278	0.179	0.055	0.025	0.026
FEB 28,84	JAN 31,84	5.36	3.30	0.784	0.183	0.080	0.022	0.036
MAR 27,84	FEB 28,84	5.13	2.32	0.171	0.107	0.087	0.043	0.032
APR 24,84	MAR 27,84	6.15	2.08	0.112	0.030	0.170	0.033	0.037
MAY 22,84	APR 24,84	1.97	1.63	0.195	0.125	0.189	0.059	0.035
JUN 19,84	MAY 22,84	1.16	2.97	0.206	0.133	0.169	0.041	0.049
JUL 17,84	JUN 19,84	0.58	1.96	0.098	0.116	0.161	0.038	0.120
AUG 14,84	JUL 17,84	0.56	3.35	0.113	0.193	0.197	0.043	0.137
SEP 11,84	AUG 14,84	0.80	3.81	0.219	0.247	0.244	0.075	0.095
OCT 9,84	SEP 11,84	0.47	1.24	0.131	D 0.092	0.116	0.023	0.032
NOV 6,84	OCT 9,84	1.66	3.87	0.266	0.159	0.074	0.046	0.076
DEC 4,84	NOV 6,84	1.11	1.91	0.517	0.292	0.208	0.046	0.049
JAN 1,85	DEC 4,84	2.11	1.35	0.234	0.426	0.061	0.054	0.025

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TURKEY LAKE/CUMULATIVE/LO-VOL #37

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 4,84	DEC 6,83	0.109	0.013	0.008	0.008	0.0017	0.0010	< 0.00064
JAN 31,84	JAN 4,84	0.149	0.020	0.010	0.006	0.0026	0.0011	< 0.00066
FEB 28,84	JAN 31,84	0.082	0.037	0.015	0.015	0.0046	0.0017	0.00170
MAR 27,84	FEB 28,84	0.164	0.043	0.017	0.009	0.0029	0.0019	< 0.00071
APR 24,84	MAR 27,84	0.074	0.066	0.035	0.022	0.0037	0.0037	0.00119
MAY 22,84	APR 24,84	0.056	0.127	0.121	0.008	0.0056	0.0014	< 0.00069
JUN 19,84	MAY 22,84	0.059	0.096	0.122	0.006	0.0049	0.0032	0.00112
JUL 17,84	JUN 19,84	0.047	0.084	0.116	0.014	0.0043	0.0051	< 0.00072
AUG 14,84	JUL 17,84	0.060	0.129	0.205	0.014	0.0056	0.0032	0.00855
SEP 11,84	AUG 14,84	0.131	0.182	0.147	0.012	0.0085	0.0042	< 0.00071
OCT 9,84	SEP 11,84	0.028	0.034	0.027	0.022	0.0021	0.0021	< 0.00071
NOV 6,84	OCT 9,84	0.052	0.097	0.029	0.009	0.0035	0.0048	0.00083
DEC 4,84	NOV 6,84	0.097	0.051	0.037	0.016	0.0042	0.0015	0.00111
JAN 1,85	DEC 4,84	0.241	0.036	0.044	0.013	0.0028	0.0016	0.00284

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 4,84	DEC 6,83	< 0.0013	0.004	0.00023
JAN 31,84	JAN 4,84	< 0.0013	0.006	0.00016
FEB 28,84	JAN 31,84	< 0.0013	0.012	0.00029
MAR 27,84	FEB 28,84	< 0.0014	0.006	0.00026
APR 24,84	MAR 27,84	< 0.0015	0.017	D 0.00342
MAY 22,84	APR 24,84	< 0.0014	0.022	0.00028
JUN 19,84	MAY 22,84	< 0.0014	0.006	0.00035
JUL 17,84	JUN 19,84	< 0.0015	0.007	0.00036
AUG 14,84	JUL 17,84	< 0.0016	0.010	0.00040
SEP 11,84	AUG 14,84	< 0.0014	0.016	0.00078
OCT 9,84	SEP 11,84	< 0.0014	< 0.001	0.00021
NOV 6,84	OCT 9,84	0.0004	0.006	0.00039
DEC 4,84	NOV 6,84	0.0010	0.014	0.00026
JAN 1,85	DEC 4,84	< 0.0003	0.006	0.00028

PART VII

NORTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORION/CUMULATIVE/LO-VOL

#31

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	900	1030	72968.0	34026	2	1	B	
JAN 31,84	JAN 3,84	1015	915	79048.0	34027	2	1		
FEB 28,84	JAN 31,84	915	915	77163.0	34329	2	1		
MAR 27,84	FEB 28,84	915	900	80075.0	34030	2	1		
APR 24,84	MAR 27,84	900	900	78110.0	34034	2	1		
MAY 22,84	APR 24,84	900	920	52099.0	34332	2	1	BD	
JUN 19,84	MAY 22,84	920	900	71625.0	34038	2	1	A	
JUL 17,84	JUN 19,84	900	1043	77782.0	34039	2	1		
AUG 14,84	JUL 17,84	1043	944	74682.0	34041	2	1		
SEP 11,84	AUG 14,84	944	936	76211.0	34042	2	1	B	
OCT 9,84	SEP 11,84	936	915	69084.0	34043	2	1	A	
NOV 6,84	OCT 9,84	930	900	74870.0	34044	2	1	B	
DEC 4,84	NOV 6,84	900	920	77205.0	34045	2	1	C	
JAN 2,85	DEC 4,84	920	930	76709.0	34046	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	2.01	*****	*****	*****	0.027	0.020	0.014
JAN 31,84	JAN 3,84	1.39	1.47	0.133	0.129	0.048	0.025	0.037
FEB 28,84	JAN 31,84	0.81	2.44	0.185	0.126	0.077	0.027	0.028
MAR 27,84	FEB 28,84	1.66	0.78	0.087	0.125	0.036	0.016	0.012
APR 24,84	MAR 27,84	0.94	0.10	0.035	0.122	0.033	0.011	<T 0.010
MAY 22,84	APR 24,84	0.32	2.16	0.077	0.154	0.803	0.249	0.086
JUN 19,84	MAY 22,84	0.16	1.95	0.087	0.084	0.221	0.169	0.063
JUL 17,84	JUN 19,84	0.11	1.25	0.045	0.096	0.291	D -0.617	0.051
AUG 14,84	JUL 17,84	0.07	1.54	0.054	0.107	0.324	D 0.742	0.060
SEP 11,84	AUG 14,84	<T 0.04	2.00	0.072	0.105	0.235	0.152	0.112
OCT 9,84	SEP 11,84	0.14	1.52	0.112	0.080	0.269	D 0.176	0.083
NOV 6,84	OCT 9,84	0.27	2.90	0.124	0.053	0.050	0.042	0.057
DEC 4,84	NOV 6,84	<W 0.02	0.16	0.026	0.078	0.134	0.025	<T 0.006
JAN 2,85	DEC 4,84	1.17	1.27	0.134	0.332	0.076	0.093	0.046

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORION/CUMULATIVE/LO-VOL

#31

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.130	0.010	0.007	0.008	0.0011	0.0011	< 0.00069
JAN 31,84	JAN 3,84	0.170	0.016	0.009	0.005	0.0014	0.0011	< 0.00068
FEB 28,84	JAN 31,84	0.122	0.028	0.014	0.011	0.0014	< 0.0007	0.00182
MAR 27,84	FEB 28,84	0.069	0.016	0.010	0.004	0.0010	0.0010	0.00287
APR 24,84	MAR 27,84	0.032	0.014	0.013	0.008	0.0010	< 0.0006	< 0.00064
MAY 22,84	APR 24,84	0.163	0.439	0.462	0.009	0.0134	0.0140	0.00249
JUN 19,84	MAY 22,84	0.049	0.173	0.248	0.010	0.0084	0.0063	0.00112
JUL 17,84	JUN 19,84	0.039	0.361	0.271	0.007	D 0.0135	0.0036	0.00167
AUG 14,84	JUL 17,84	0.064	0.374	D 1.010	0.006	D 0.0174	0.0017	< 0.00067
SEP 11,84	AUG 14,84	0.079	0.157	0.283	0.008	0.0072	0.0026	0.00105
OCT 9,84	SEP 11,84	0.047	0.128	0.289	0.009	0.0058	0.0022	< 0.00072
NOV 6,84	OCT 9,84	0.053	0.033	0.039	0.008	0.0027	0.0013	0.00134
DEC 4,84	NOV 6,84	0.026	0.017	0.020	0.003	D 0.0010	0.0010	0.00142
JAN 2,85	DEC 4,84	0.303	0.036	0.049	0.004	0.0020	0.0003	0.00182

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0014	0.003	0.00016
JAN 31,84	JAN 3,84	< 0.0014	0.005	< 0.00007
FEB 28,84	JAN 31,84	< 0.0014	0.003	0.00011
MAR 27,84	FEB 28,84	< 0.0012	0.004	0.00010
APR 24,84	MAR 27,84	< 0.0013	0.001	< 0.00006
MAY 22,84	APR 24,84	< 0.0019	0.008	0.00025
JUN 19,84	MAY 22,84	< 0.0014	0.008	0.00021
JUL 17,84	JUN 19,84	< 0.0013	D 0.012	0.00019
AUG 14,84	JUL 17,84	< 0.0013	0.003	0.00020
SEP 11,84	AUG 14,84	< 0.0013	0.006	0.00033
OCT 9,84	SEP 11,84	< 0.0014	0.002	0.00022
NOV 6,84	OCT 9,84	0.0004	0.008	0.00021
DEC 4,84	NOV 6,84	0.0003	0.002	0.00012
JAN 2,85	DEC 4,84	0.0008	0.002	0.00023

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EAR FALLS/CUMULATIVE/LO-VOL

#35

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 4,84	DEC 6,83	1040	900	88716.0	34228	2	1		
JAN 31,84	JAN 4,84	900	900	76020.0	34229	2	1		
FEB 28,84	JAN 31,84	900	910	81376.0	34230	2	1		
MAR 27,84	FEB 28,84	910	905	84193.0	34231	2	1		
APR 24,84	MAR 27,84	905	850	85242.0	34233	2	1		
MAY 22,84	APR 24,84	850	900	78159.0	34234	2	1	QD	
JUN 19,84	MAY 22,84	900	900	81852.0	34235	2	1		
JUL 17,84	JUN 19,84	900	900	59676.0	34236	2	1		
AUG 14,84	JUL 17,84	900	856	79901.0	34237	2	1		
SEP 11,84	AUG 14,84	856	900	57756.0	34238	2	1	B	
OCT 10,84	SEP 11,84	900	900	79956.0	34239	2	1		
NOV 8,84	OCT 10,84	900	900	81719.0	34240	2	1		
DEC 4,84	NOV 8,84	900	900	67249.0	34241	2	1	C	Z
JAN 2,85	DEC 4,84	900	900	80632.0	34242	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 4,84	DEC 6,83	1.32	*****	*****	*****	0.022	0.024	0.028
JAN 31,84	JAN 4,84	1.31	1.97	0.151	0.164	0.057	0.034	0.039
FEB 28,84	JAN 31,84	0.45	2.00	0.283	0.123	0.044	0.017	0.031
MAR 27,84	FEB 28,84	1.17	0.33	0.071	0.142	0.036	0.012	<T 0.009
APR 24,84	MAR 27,84	0.47	0.35	0.109	0.141	0.078	0.021	0.041
MAY 22,84	APR 24,84	0.15	1.02	0.051	0.102	0.330	0.119	0.051
JUN 19,84	MAY 22,84	<W 0.02	0.89	0.052	0.092	0.259	0.106	0.046
JUL 17,84	JUN 19,84	<T 0.06	0.80	0.034	0.100	0.127	0.054	0.034
AUG 14,84	JUL 17,84	<T 0.04	1.03	0.072	0.113	0.148	0.057	D 0.613
SEP 11,84	AUG 14,84	<W 0.03	1.21	0.069	0.156	0.379	0.127	0.069
OCT 10,84	SEP 11,84	0.10	1.63	0.088	0.069	0.157	0.049	0.047
NOV 8,84	OCT 10,84	0.26	2.51	0.122	0.067	0.065	0.037	0.043
DEC 4,84	NOV 8,84	0.15	1.15	0.175	0.223	0.120	0.039	0.026
JAN 2,85	DEC 4,84	0.91	1.09	0.146	0.316	0.081	0.068	0.037

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EAR FALLS/CUMULATIVE/LO-VOL

#35

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANESE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 4,84	DEC 6,83	0.158	0.015	0.007	0.016	0.0015	0.0009	< 0.00056
JAN 31,84	JAN 4,84	0.201	0.028	0.012	0.010	0.0039	0.0013	0.00263
FEB 28,84	JAN 31,84	0.080	0.033	0.019	0.010	0.0012	0.0016	< 0.00061
MAR 27,84	FEB 28,84	0.068	0.056	0.016	0.003	0.0015	< 0.0006	0.00095
APR 24,84	MAR 27,84	0.059	0.042	0.034	0.007	0.0012	< 0.0006	< 0.00059
MAY 22,84	APR 24,84	0.074	0.262	0.303	0.008	0.0109	0.0042	< 0.00064
JUN 19,84	MAY 22,84	0.043	0.276	0.325	0.016	0.0086	0.0049	0.00098
JUL 17,84	JUN 19,84	0.042	0.138	0.179	0.014	0.0042	0.0030	0.00134
AUG 14,84	JUL 17,84	0.047	0.128	0.139	0.009	0.0044	0.0016	< 0.00063
SEP 11,84	AUG 14,84	0.087	0.232	0.355	0.013	0.0104	0.0026	0.00260
OCT 10,84	SEP 11,84	0.031	0.101	0.139	0.020	0.0044	0.0019	< 0.00063
NOV 8,84	OCT 10,84	0.055	0.006	0.031	0.009	0.0043	0.0009	0.00367
DEC 4,84	NOV 8,84	0.167	0.071	0.035	0.013	0.0022	0.0007	0.00089
JAN 2,85	DEC 4,84	0.248	0.035	0.031	0.007	0.0019	0.0006	0.00223

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 4,84	DEC 6,83	< 0.0011	0.003	0.00020
JAN 31,84	JAN 4,84	< 0.0013	0.009	0.00016
FEB 28,84	JAN 31,84	< 0.0012	0.002	0.00015
MAR 27,84	FEB 28,84	< 0.0012	0.002	< 0.00006
APR 24,84	MAR 27,84	< 0.0012	0.002	0.00009
MAY 22,84	APR 24,84	< 0.0013	0.003	0.00017
JUN 19,84	MAY 22,84	< 0.0012	0.006	0.00018
JUL 17,84	JUN 19,84	< 0.0017	0.005	0.00022
AUG 14,84	JUL 17,84	< 0.0013	0.003	0.00010
SEP 11,84	AUG 14,84	< 0.0017	0.004	0.00040
OCT 10,84	SEP 11,84	< 0.0013	0.003	0.00019
NOV 8,84	OCT 10,84	< 0.0002	0.007	0.00034
DEC 4,84	NOV 8,84	0.0003	0.008	0.00024
JAN 2,85	DEC 4,84	0.0005	0.002	0.00025

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERALDTON/CUMULATIVE/LO-VOL

#30

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	930	1000	92868.0	34127	2	1		
JAN 31,84	JAN 3,84	1000	1000	92100.0	34129	2	1		
FEB 28,84	JAN 31,84	1000	935	88316.0	34131	2	1	A	
MAR 27,84	FEB 28,84	1000	945	86200.0	34133	2	1		
APR 24,84	MAR 27,84	945	1000	79364.0	34135	2	1		
MAY 22,84	APR 24,84	1000	1000	72647.0	34138	2	1		
JUN 19,84	MAY 22,84	1000	1020	79733.0	34141	2	1		
JUL 17,84	JUN 19,84	1020	1015	77167.0	34142	2	1		
AUG 14,84	JUL 17,84	1015	915	76953.0	34144	2	1		
SEP 11,84	AUG 14,84	915	1000	76370.0	34146	2	1		
OCT 9,84	SEP 11,84	1000	1000	63462.0	34149	2	1	B	
NOV 6,84	OCT 9,84	1000	900	72492.0	34150	2	1		
DEC 4,84	NOV 6,84	900	1100	79685.0	34153	2	1	D	
JAN 2,85	DEC 4,84	1100	1320	87072.0	34155	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	1.62	*****	*****	*****	0.041	0.028	0.019
JAN 31,84	JAN 3,84	0.76	0.65	0.057	0.081	0.028	0.012	<T 0.008
FEB 28,84	JAN 31,84	0.89	1.84	0.187	0.096	0.041	0.015	0.017
MAR 27,84	FEB 28,84	1.30	1.13	0.078	0.133	0.130	0.043	0.023
APR 24,84	MAR 27,84	1.49	0.22	0.044	0.107	0.091	0.016	<T 0.009
MAY 22,84	APR 24,84	0.28	1.62	0.096	0.096	0.242	0.062	0.038
JUN 19,84	MAY 22,84	0.17	1.16	0.078	0.075	0.368	0.088	0.044
JUL 17,84	JUN 19,84	0.16	1.62	0.087	0.091	0.304	0.058	0.078
AUG 14,84	JUL 17,84	<T 0.04	1.46	0.055	0.104	0.196	0.031	0.084
SEP 11,84	AUG 14,84	<T 0.04	2.49	0.098	0.124	0.293	0.082	0.085
OCT 9,84	SEP 11,84	0.18	1.34	0.130	0.102	0.189	0.040	0.039
NOV 6,84	OCT 9,84	0.57	2.83	0.114	0.041	0.089	0.034	0.038
DEC 4,84	NOV 6,84	0.50	1.38	0.264	0.257	D 0.499	D 0.096	0.025
JAN 2,85	DEC 4,84	0.88	0.49	0.086	0.218	0.073	0.028	0.020

-43-

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERALDTON/CUMULATIVE/LO-VOL

#30

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANESE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.161	0.008	0.003	0.006	0.0009	0.0014	< 0.00054
JAN 31,84	JAN 3,84	0.090	0.012	0.005	0.002	< 0.0005	0.0009	0.00087
FEB 28,84	JAN 31,84	0.076	0.040	0.008	0.005	0.0011	0.0009	< 0.00057
MAR 27,84	FEB 28,84	0.119	0.023	0.015	0.004	0.0012	0.0015	0.00093
APR 24,84	MAR 27,84	0.050	0.017	0.009	D 0.003	0.0013	0.0035	0.00315
MAY 22,84	APR 24,84	0.079	0.088	0.075	0.003	0.0034	0.0011	< 0.00069
JUN 19,84	MAY 22,84	0.056	0.164	0.108	0.006	0.0063	0.0031	< 0.00063
JUL 17,84	JUN 19,84	D 0.065	0.082	0.068	0.006	0.0039	0.0039	< 0.00065
AUG 14,84	JUL 17,84	0.088	0.043	0.057	0.004	0.0026	0.0017	< 0.00065
SEP 11,84	AUG 14,84	0.111	0.134	0.166	0.007	0.0065	0.0026	0.00131
OCT 9,84	SEP 11,84	0.102	0.054	0.086	0.027	0.0032	0.0016	< 0.00079
NOV 6,84	OCT 9,84	0.066	0.028	0.027	0.003	0.0021	0.0021	0.00083
DEC 4,84	NOV 6,84	0.157	0.049	0.044	0.006	0.0025	0.0018	0.00100
JAN 2,85	DEC 4,84	0.141	0.011	0.004	0.001	0.0011	0.0014	0.00161

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0011	0.004	0.00019
JAN 31,84	JAN 3,84	< 0.0011	0.002	< 0.00005
FEB 28,84	JAN 31,84	< 0.0011	0.001	0.00009
MAR 27,84	FEB 28,84	< 0.0012	0.003	0.00009
APR 24,84	MAR 27,84	< 0.0013	0.002	0.00010
MAY 22,84	APR 24,84	< 0.0014	0.007	0.00018
JUN 19,84	MAY 22,84	< 0.0013	0.004	D 0.00050
JUL 17,84	JUN 19,84	< 0.0013	0.004	0.00019
AUG 14,84	JUL 17,84	< 0.0013	0.003	0.00019
SEP 11,84	AUG 14,84	< 0.0013	0.005	0.00030
OCT 9,84	SEP 11,84	< 0.0016	< 0.002	0.00024
NOV 6,84	OCT 9,84	0.0010	0.008	0.00032
DEC 4,84	NOV 6,84	0.0003	0.008	0.00013
JAN 2,85	DEC 4,84	0.0005	0.002	0.00018

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : OTTER ISLAND/CUMULATIVE/LO-VOL #38

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD OFFICE
MAY 22,84	APR 24,84	1250	900	59816.0	31060	2	1	C
JUN 19,84	MAY 22,84	900	900	56085.0	31061	2	1	C
JUL 17,84	JUN 19,84	900	900	75640.0	31062	2	1	C
AUG 14,84	JUL 17,84	900	900	66902.0	31063	2	1	B
SEP 11,84	AUG 14,84	900	900	74314.0	31064	2	1	
OCT 9,84	SEP 11,84	900	900	79989.0	31065	2	1	D
NOV 6,84	OCT 9,84	900	900	78971.0	31066	2	1	

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
MAY 22,84	APR 24,84	D 2.24	2.52	0.298	0.101	0.212	0.065	0.046
JUN 19,84	MAY 22,84	D 0.87	2.77	0.295	D 0.125	0.258	0.061	0.045
JUL 17,84	JUN 19,84	D 0.66	1.62	0.155	0.093	0.164	0.030	0.053
AUG 14,84	JUL 17,84	D 0.52	2.32	0.131	0.082	0.086	0.014	0.037
SEP 11,84	AUG 14,84	<W 0.02	0.71	0.091	0.094	0.080	0.026	0.071
OCT 9,84	SEP 11,84	D 0.92	1.81	0.191	0.125	0.189	0.038	D 0.228
NOV 6,84	OCT 9,84	<W 0.02	<W 0.03	0.000	0.070	0.063	0.034	<T 0.006

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : OTTER ISLAND/CUMULATIVE/LO-VOL #38

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMINIUM UG/M**3	LEAD UG/M**3	MANGANESE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
MAY 22,84	APR 24,84	0.071	0.143	0.084	0.033	0.0067	0.0089	0.00168
JUN 19,84	MAY 22,84	0.067	0.169	0.170	0.013	0.0072	0.0045	< 0.00089
JUL 17,84	JUN 19,84	0.046	0.096	0.066	0.006	0.0053	0.0026	0.00132
AUG 14,84	JUL 17,84	0.056	0.048	0.051	0.008	0.0022	D 0.0022	< 0.00075
SEP 11,84	AUG 14,84	0.061	0.040	< 0.003	0.005	0.0027	0.0027	0.00269
OCT 9,84	SEP 11,84	*****	0.064	0.051	0.006	0.0030	0.0040	< 0.00063
NOV 6,84	OCT 9,84	0.019	0.011	< 0.003	0.001	< 0.0006	0.0020	0.00076

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
MAY 22,84	APR 24,84	< 0.0017	0.011	0.00025
JUN 19,84	MAY 22,84	< 0.0018	0.010	0.00027
JUL 17,84	JUN 19,84	< 0.0013	0.006	0.00020
AUG 14,84	JUL 17,84	< 0.0015	0.002	0.00030
SEP 11,84	AUG 14,84	< 0.0013	0.003	0.00005
OCT 9,84	SEP 11,84	< 0.0012	0.002	0.00020
NOV 6,84	OCT 9,84	< 0.0003	0.002	0.00005

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PICKLE LAKE/CUMULATIVE/LO-VOL #36

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	OFFICE
JAN 3,84	DEC 6,83	730	730	81729.0	34327	2	1		
JAN 31,84	JAN 3,84	735	740	73602.0	34328	2	1		
FEB 28,84	JAN 31,84	740	735	71163.0	34029	2	1		
MAR 27,84	FEB 28,84	735	740	75087.0	34330	2	1		
APR 24,84	MAR 27,84	740	735	69858.0	34331	2	1		
MAY 22,84	APR 24,84	735	735	67082.0	34137	2	1	AC	F
JUN 19,84	MAY 22,84	735	800	79898.0	34333	2	1		
JUL 18,84	JUN 19,84	800	800	81434.0	34334	2	1		
SEP 11,84	JUL 18,84	800	1000	153215.0	34335	2	1	Q	Z
OCT 9,84	SEP 11,84	1000	1100	40526.0	34336	2	1	A	
NOV 6,84	OCT 9,84	1100	1045	10539.0	34337	2	1	A	F
DEC 4,84	NOV 6,84	1045	1215	64746.0	34338	2	1	C	
JAN 2,85	DEC 4,84	1215	1120	71276.0	34339	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CHLORIDE UG/M**3	CALCIUM UG/M**3	MAGNESIM UG/M**3	POTASSIM UG/M**3
JAN 3,84	DEC 6,83	1.84	*****	*****	*****	< 0.012	0.031	0.018
JAN 31,84	JAN 3,84	2.35	2.00	0.115	0.163	0.035	0.039	0.024
FEB 28,84	JAN 31,84	1.24	2.67	0.369	0.147	0.064	0.019	0.035
MAR 27,84	FEB 28,84	2.15	1.56	0.060	0.187	0.114	0.058	0.020
APR 24,84	MAR 27,84	1.31	0.54	0.061	0.158	D 0.299	D 0.063	0.021
MAY 22,84	APR 24,84	U 0.75	U 9.69	U 0.783	U 1.044	U 2.184	U 1.461	U 0.596
JUN 19,84	MAY 22,84	<T 0.02	1.03	0.047	0.075	0.350	0.101	0.034
JUL 18,84	JUN 19,84	<T 0.04	0.52	0.031	0.086	0.512	0.154	0.080
SEP 11,84	JUL 18,84	0.03	1.09	0.059	0.091	0.354	0.112	0.047
OCT 9,84	SEP 11,84	<T 0.08	0.68	0.062	0.160	0.143	0.031	<T 0.012
NOV 6,84	OCT 9,84	U 0.16	U 1.19	U 0.142	U 0.522	U 0.304	U 0.098	U 0.071
DEC 4,84	NOV 6,84	0.67	1.08	0.124	0.185	0.124	0.027	0.042
JAN 2,85	DEC 4,84	1.17	0.88	0.081	0.281	D 0.040	0.048	0.018

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PICKLE LAKE/CUMULATIVE/LO-VOL

#36

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	SODIUM UG/M**3	IRON UG/M**3	ALUMNIUM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 3,84	DEC 6,83	0.183	0.008	0.003	0.012	0.0010	0.0010	< 0.00061
JAN 31,84	JAN 3,84	0.217	0.018	0.010	0.012	0.0011	0.0011	< 0.00068
FEB 28,84	JAN 31,84	0.088	0.026	0.014	0.010	0.0021	0.0018	< 0.00070
MAR 27,84	FEB 28,84	0.200	0.042	0.025	D 0.010	0.0020	0.0017	< 0.00067
APR 24,84	MAR 27,84	0.064	0.105	0.080	0.008	D 0.0021	0.0026	< 0.00072
MAY 22,84	APR 24,84	U 0.596	U 1.245	U 1.972	U 0.037	U 0.0671	U 0.0119	U 0.00745
JUN 19,84	MAY 22,84	0.053	0.213	0.219	0.018	0.0063	0.0075	0.00100
JUL 18,84	JUN 19,84	0.037	0.330	0.215	0.014	0.0061	D 0.0114	0.00184
SEP 11,84	JUL 18,84	0.046	0.178	0.205	0.014	0.0059	0.0062	0.00130
OCT 9,84	SEP 11,84	0.056	0.074	0.051	0.010	0.0025	0.0025	0.00370
NOV 6,84	OCT 9,84	U 0.214	U 0.138	U 0.060	U 0.005	U 0.0047	U 0.0114	U 0.00095
DEC 4,84	NOV 6,84	0.124	0.032	0.017	0.010	0.0023	0.0005	0.00201
JAN 2,85	DEC 4,84	0.193	0.018	0.011	0.008	0.0011	0.0010	0.00365

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 3,84	DEC 6,83	< 0.0012	0.004	0.00015
JAN 31,84	JAN 3,84	< 0.0014	0.007	0.00016
FEB 28,84	JAN 31,84	< 0.0014	0.004	0.00017
MAR 27,84	FEB 28,84	< 0.0013	0.003	0.00011
APR 24,84	MAR 27,84	< 0.0014	0.001	0.00011
MAY 22,84	APR 24,84	U 0.0149	U 0.037	U 0.00194
JUN 19,84	MAY 22,84	< 0.0013	0.003	0.00019
JUL 18,84	JUN 19,84	< 0.0012	0.004	0.00018
SEP 11,84	JUL 18,84	< 0.0007	0.004	0.00016
OCT 9,84	SEP 11,84	< 0.0025	< 0.002	0.00032
NOV 6,84	OCT 9,84	U 0.0019	U 0.024	U 0.00171
DEC 4,84	NOV 6,84	< 0.0003	0.003	D 0.00096
JAN 2,85	DEC 4,84	< 0.0003	0.002	0.00028

TD
195.54
.06
C86
1985

Cumulative ambient air
concentration listings :
December 6, 1983 - January 3,
1985.
77566